33 CFR Part 100

[CGD1 88-088]

Special Local Regulations; Classic Connecticut Cup Ultimate Yacht Race

AGENCY: Coast Guard, DOT.
ACTION: Final rule.

SUMMARY: The Coast Guard is adopting special local regulations for several hour periods each day between October 10, 1988 and October 16, 1988 for the Classic Connecticut Cup Ultimate Yacht Race. The event will be held on the waters of Long Island Sound south of New London, Connecticut. The Ultimate Yacht Race is part of a professional yacht racing circuit; competitors will be racing in boats ranging from 21 to 30 feet, including one class of catamarans. These regulations are needed to provide for the safety of life on the navigable waters of the United States.

EFFECTIVE DATES: These regulations will be effective from 12:30 p.m. to 3:30 p.m. on October 10 and 11, 1988 and from 10:00 a.m. to 5:30 p.m. from October 12, 1988 to October 16, 1988.

FOR FURTHER INFORMATION CONTACT: Lieutenant Luke Brown, (617) 223-8311.

SUPPLEMENTARY INFORMATION:

In accordance with 5 U.S.C. 553, a notice of proposed rulemaking has not been published for these regulations and good cause exists for making them effective in less than 30 days from the date of publication. Following normal rulemaking procedures would have been impracticable. The Coast Guard was involved in negotiations with the sponsor until September 22, 1988 and there was not sufficient time remaining to publish proposed rules in advance of the event or to provide for a delayed effective date.

Drafting Information

The drafters of these regulations are LT L. Brown, project officer, First Coast Guard District Boating Affairs Branch and CDR R.A. Brunell, project attorney, First Coast Guard District Legal Officer.

Discussion of Regulations

The Classic Connecticut Cup Ultimate Yacht Race is part of a series of professional sailboat races. Racing will be held in three different classes of yachts; J-24's (24 foot monohulls); Hobie 21's (21 foot catamarans); and Ultimate 30's (30 foot monohulls). The races will be held on the Long Island coastal waters south of New London roughly bounded to the east by the Dumping Grounds and to the west by Bartlett Reef. No vessel other than participants or those vessels authorized by either the sponsor or the Coast Guard patrol commander shall enter the regulated area. The course will be marked by inflatable drop buoys. The spectator area will be to the south of the regulated area and sponsor provided vessels will form a spectator barrier to prevent vessels from entering the race course. Buoys marking both the course and the edge of the spectator area will be put in place each day one hour prior to the effective time of regulation and will be removed at the conclusion of the day's racing. The regulated area will be patrolled by the Coast Guard, Coast Guard Auxiliary, sponsor-provided patrols, and state and local law enforcement officials.

List of Subjects in 33 CFR Part 100

Marine safety, Navigation (water).

Regulations

In consideration of the foregoing, Part 100 of Title 33, Code of Federal Regulations, is amended as follows:

PART 100—[AMENDED]

1. The authority citation continues to read as follows:

Authority: 33 U.S.C. 1233; 49 CFR 1.46 and 33 CFR 100.35.

2. A temporary § 100.35-01-88 is added to read as follows:

§ 100.35-01-88 Classic Connecticut Cup Ultimate Yacht Race.

(a) Regulated Area. The regulated area, located in the Long Island Sound waters south of New London, Connecticut, is bounded to the north by the New London shore and extends seaward in a rectangular shape and is specifically bounded as follows:

(1) Northwest Corner; The New London shore at Seaside Point at 41-18-00 North; 072-08-00 West.

(2) Northeast Corner; The New London shore near Long Rock at 41-18-33 North; 072-05-43 West.

(3) Southeast Corner; a point within the New London Dumping Grounds approximately three quarters (3/4) of a mile miles north of Yellow Buoy "NL" at 41-16-30 North; 072-04-50 West.

(4) Southwest Corner; a point approximately three quarters (3/4) of a mile southeast of Bartlett Reef at 41-16-08 North; 072-07-30 West.

(b) Special Local Regulations. (1)The sponsor shall be responsible for proper marking of the course. The buoys marking the course shall be in position no later than one hour prior to the start of the each race and the buoys shall be removed no later than one hour after the completion of the race. The sponsor shall report to the Coast Guard patrol commander both when the marks are in place and again when they are removed.

(2) No person or vessel may transit through, or remain in, the regulated area during the effective period of regulation unless participating in the event or as authorized by the sponsor or Coast Guard patrol personnel. The patrol commander may authorize vessels use of the general anchorage within the regulated area.

(3) The spectator area shall be to the south of the regulated area. Sponsor provided patrol boats shall set up a spectator barrier along the southern edge of the regulated area. The patrol boats shall display a distinct and visible banner that identifies them as the edge of the spectator area. All spectating vessels shall observe the racing from the spectator area.

(4) The sponsor shall establish, and advise the Coast Guard patrol commander of, a readily identifiable color coding system to differentiate between sponsor patrol vessels, spectator area vessels, and VIP/Race Official boats. The color coding will enable the patrol commander to identify the purpose of each vessel operating in, or near, the regulated area.

(5) Any violations of these regulations, by either the sponsor or participants, shall be sufficient grounds for the Coast Guard patrol commander to terminate the event.

(c) Effective Dates. These regulations will be effective from 12:30 p.m. to 3:30 p.m. on October 10th and 11th, 1988 and from 10:00 a.m. to 5:30 p.m. from October 12, 1988 to October 16, 1988.

Dated: September 30, 1988.

R.O. Buttrick,
Captain, U.S. Coast Guard, Acting Commander, First Coast Guard District.

[FR Doc. 88-23113 Filed 10-5-88; 8:45 am]
BILLING CODE 4910-14-M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Public Land Order 6687

[NV-943-08-4220-10; N-42415, N-42735, N-43342, N-43390]

Withdrawal of Public Land for Four Federal Aviation Administration VORTAC Air Navigation Sites; Nevada

AGENCY: Bureau of Land Management, Interior.

ACTION: Public Land Order.

SUMMARY: This order withdraws 399.10 acres of public lands from surface entry

and mining for a period of 20 years for the Federal Aviation Administration to protect four VORTAC air navigation sites. The lands have been and remain open to mineral leasing.

EFFECTIVE DATE: October 6, 1988.

FOR FURTHER INFORMATION CONTACT: Vienna Wolder, BLM, Nevada State Office, P.O. Box 12000, Reno, Nevada 89520, 702-784-5481.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2751; 43 U.S.C. 1714, it is ordered as follows:

1. Subject to valid existing rights, the following described public lands are hereby withdrawn from settlement, sale, location, or entry under the general land laws, including the United States mining laws (30 U.S.C. Ch. 2), but not from leasing under the mineral leasing laws, to protect four Federal Aviation Administration VORTAC air navigation sites:

Mount Diablo Meridian

T. 26 N., R. 30 E.,
Sec. 14, NE¼, E½NW¼, NE¼SW¼, N½SE¼.
T. 41 N., R. 35 E.,
Sec. 27, NW¼NE¼NW¼NW¼, W½NW¼NW¼, W½SW¼NW¼, NW¼SE¼SW¼NW¼, S½SE¼S W¼NW¼, SW¼SW¼SE¼NW¼.
T. 13 S., R. 47 E.,
Sec. 17, W½E½SW¼SE¼, W½SE¼N W¼SE¼;
Sec. 20, S½NE¼NW¼, SW¼NW¼NE¼, W½NE¼NW¼NE¼, SE¼NW¼NW¼.
T. 13 S., R. 69 E.,
Sec. 27, NW¼SW¼;
Sec. 28, NE¼SE¼.

The areas described aggregate 399.10 acres in Clark, Humboldt, Nye, and Pershing Counties.

2. The withdrawal made by this order does not alter the applicability of those public land laws governing the use of the lands under lease, license, or permit, or governing the disposal of their mineral or vegetative resources other than under the mining laws.

3. This withdrawal will expire 20 years from the effective date of this order unless, as a result of a review conducted before the expiration date pursuant to section 204(f) of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714(f), the Secretary determines that the withdrawal shall be extended.

Dated: September 21, 1988.

J. Steven Griles,
Assistant Secretary of the Interior.

[FR Doc. 88-23038 Filed 10-5-88; 8:45 am]

BILLING CODE 4310-HC-M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 531

[Docket No. FE-88-01; Notice 3]

RIN No. 2127-AB75

Passenger Automobile Average Fuel Economy Standards for Model Year 1989

AGENCY: National Traffic Safety Administration (NHTSA), DOT.

ACTION: Final rule.

SUMMARY: The Department of Transportation's National Highway Traffic Safety Administration is setting the passenger automobile average fuel economy standard for Model Year (MY) 1989 at 26.5 miles per gallon (mpg), an increase of 0.5 mpg over the 1988 level. NHTSA is taking this action because it has determined that 26.5 mpg is the "maximum feasible average fuel economy level," after balancing the statutory criteria of economic practicability, technological feasibility, the effect of other Federal motor vehicle standards, and the need of the nation to conserve energy. The standard is a decrease of 1.0 mpg from the statutory level.

DATES: The amendments made by this rule to the Code of Federal Regulations are effective November 7, 1988. The standard is applicable to the 1989 model year. Petitions for reconsideration must be received by November 7, 1988.

ADDRESS: Petitions for reconsideration should be submitted to: Administrator, National Highway Traffic Safety Administration, Room 5109, 400 Seventh Street, SW., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mr. Orron Kee, Office of Market Incentives, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. (202) 366-0846.

SUPPLEMENTARY INFORMATION:

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I. Overview of Decision

In each of the last three years, the Department of Transportation has closely examined the effects of the corporate average fuel economy (CAFE) standard on the U.S. auto industry. We concluded that a standard of 27.5 mpg for MYs 1986-1988 posed a threat to the jobs of U.S. auto workers, workers in industries that supply parts and equipment to the auto industry, and employees of auto dealerships. On the other hand, we concluded that the energy conservation benefits of a higher standard were speculative and small. After balancing these and other considerations, we set the standard for each of those years at 26.0 mpg.

Those rulemaking actions as well as

this one should be considered in light of the fact that the fleet of new cars sold in the United States has never been more fuel efficient. Congress' statutory goal of reaching an average fuel economy of 27.5 mpg for new cars has been met and exceeded. In MY 1988, the average fuel economy of the combined new car fleet of all manufacturers was 28.7 mpg. The domestic automobile industry has spent billions of dollars to achieve this goal, while continuing to provide a wide variety of vehicles to meet consumer demands. Yet, despite this remarkable industrywide improvement in fuel economy, a CAFE standard of 27.5 mpg for MY 1989 poses significant threats to the competitiveness of U.S. manufacturers, which in turn, raises serious, continuing concerns about retaining jobs at those companies.

The threat to American jobs arises primarily because of two provisions of the CAFE law: First, the requirement that compliance be demonstrated on a corporate fleet average basis, and second, the requirement that U.S. manufacturers separate their fleets into two categories—domestic and "not domestically manufactured," or imported.

The first of these, the fleet averaging requirement, was originally intended to ensure that manufacturers could continue to offer consumers a wide choice of makes and models, because compliance with the standard would be measured on a fleet average basis. In other words, a manufacturer could continue to offer models that achieved fuel economy levels below the standard, as long as it sold a sufficient number of models that exceeded the standard. While intended as a means to preserve consumer choice, the provision gives a real advantage to Asian and some European manufacturers that generally have not been manufacturing large, family-size or luxury vehicles. The setting of the standards largely based on the capabilities of the major domestic manufacturers results in standards that are well below the capabilities of these foreign manufacturers, giving them substantial latitude in designing and introducing new models to take advantage of changing consumer preferences. While the full-line U.S. manufacturers must struggle to adjust their fleet mixes to meet the standard on a fleet average basis, these other companies are manufacturing fleets that are automatically more fuel efficient by virtue of their sales mix, but not by virtue of any inherent fuel efficiency superiority of their individual models. Thus, they need not be concerned with the adverse CAFE effects of their new, higher performing, less fuel-efficient models that the market now demands. And, as discussed below, they are actively entering the larger and luxury car markets in the U.S., posing a real competitive threat to the U.S. manufacturers in this segment.

The second provision that seriously threatens U.S. competitiveness is the "domestic content" provision, also known as the "two-fleet rule." This provision was originally intended to protect U.S. jobs, but now perversely threatens them by providing a positive incentive to ship U.S. jobs out of the country. As noted briefly above, the law requires U.S. manufacturers to separate their fleets into two categories for compliance purposes: A "domestic" fleet and a "not domestically manufactured" (or, import) fleet. In fact, the law's definition of "domestically manufactured" is so strict that many cars assembled in the U.S. (including all U.S.-built Japanese models and all models built at U.S.-Asian joint venture plants) fail to qualify as "domestically manufactured." The result is that each Asian and European manufacturer has only one CAFE fleet (an imported fleet), while each U.S. manufacturer has a domestic fleet and an imported fleet, each of which has to meet the CAFE standard separately. Thus, while two-fleet rule theoretically applies to all manufacturers, as a practical matter, only the U.S. manufacturers are subject to the two-fleet rule and suffer its perverse consequences.

As we have noted in several previous CAFE rulemaking proceedings, this "domestic content" provision encourages auto makers to move production of their larger models, or parts of those cars, out of the U.S. in order to average those models with their smaller models. This action is known as "outsourcing." In his comments to us on this proceeding, Mr. Owen Bieber, the President of the United Auto Workers, characterized this incentive to outsource as the statute "stood on its head." He urged us to consider that outsourcing threatens "good paying jobs * * * for American workers with no improvements in overall fuel economy or environmental benefits." NHTSA concurs with Mr. Bieber's assessment of the adverse impact of outsourcing due to the two-fleet rule. However, the agency is unable to change the practice, because it is mandated by the statute.

The adverse competitive effects of the two-fleet rule are all the harder to accept when one observes that GM would *exceed* the 27.5 mpg level if it could combine its domestic and import fleets. However, the agency has no authority to permit it to do so, since the two-fleet rule is statutorily mandated. Nevertheless, it is important to remember that this entire proceeding is focusing on a statutorily created, artificial subset of the new car fleet: the domestic fleet of the two largest U.S. manufacturers.

After separating the fleets, each manufacturer's fleet must meet the CAFE standard separately. However, for the reasons described above, the U.S. manufacturers cannot average together their own imported cars (which are generally more fuel-efficient than the average U.S.-made cars) with their U.S.-made cars, although GM would easily comply with the standard if it could do so. As an example, the Chevrolet Sprint (Geo Metro) is rated by the Environmental Protection Agency as the most fuel-efficient car sold in the United States, but GM cannot average its fuel economy with larger domestic cars because the Sprint (Geo Metro) must be classified as part of GM's import fleet.

The Japanese manufacturers, however, can average together their smallest, most fuel-efficient models (e.g., the Honda CRX, Toyota Corolla or Nissan Sentra) with their higher-performance or luxury models (such as the Acura Legend and the upcoming Infiniti and Lexus) because the two-fleet rule does not affect them except to the extent that one of their models exceeds 75 percent domestic content. This places U.S. manufacturers at a relative disadvantage. As Congressman Bob Carr testified during the public hearing in this proceeding, "If I were a Japanese auto manufacturer, and I wanted to write a law in the United States that would help me and hinder American automobile manufacturers, I couldn't have written a better law than the CAFE law that we have today."

Since the Japanese and other Asian manufacturers can freely introduce new, higher-performance large or luxury models (with lower fuel economy) without fear of CAFE noncompliance, they are free to adopt strategies that attempt to secure their position in the marketplace for these luxury cars. According to the comments submitted by the Department of Commerce, it is likely that the Japanese will aggressively seek to expand market share in the segments in which they compete. And the wave of new introductions into this market segment is expected to continue.

The trade press is widely reporting that Nissan and Toyota are planning to introduce new luxury car models in the next few years, some of which are planned to be larger than the full-size Oldsmobile 98 offered today by General Motors. Based on the past practices of these companies, it is likely that they will seek to capture a significant portion of the market segment for these new models.

The comments of the Department of Commerce, Bureau of Economics at the Federal Trade Commission, and the Council of Economic Advisors explain that when the U.S. manufacturers are forced to respond to high CAFE standards, they must consider adopting pricing and marketing strategies on their models which distort consumer demand, in order to discourage buyers from the larger or luxury models with lower fuel economy and encourage the purchase of the smaller, more fuel-efficient models. The Commerce Department notes that CAFE-induced price increases on larger (or higher performance) domestic cars may well result in further market share loss for U.S. manufacturers because it will tend to shift consumers toward competing models from foreign manufacturers who are not forced to impose CAFE price hikes. Perversely, the CAFE law affirmatively encourages consumers to buy foreign models and discourages them from buying U.S.-made cars. As a result, the competitiveness of American manufacturers is harmed and jobs in domestic auto manufacturing are reduced.

Based on its concerns about adverse competitive effects, the Department has recommended repeal of the CAFE law. However, unless and until Congress acts, NHTSA must and will continue to administer the CAFE law in its current form and to be faithful to the intent of Congress.

As discussed above, we have closely studied the adverse effects of the CAFE program on the U.S. auto industry. We have attempted to administer the statute entrusted to our care by taking seriously the Congressional directive to ensure that the program does not threaten U.S. jobs or the health of the U.S. auto industry while still meeting the needs of energy conservation. After balancing these concerns, we set the standard for MYs 1986–1988 at 26.0 mpg. We did this in accordance with a methodology that we believe is faithful to the statutory purposes. As noted herein, this methodology includes a review of whether the manufacturers had made "reasonable efforts" to reach the statutorily set level of 27.5 mpg, and a review of what the "maximum feasible" CAFE level is, taking into account the four statutory criteria. This methodology also includes analyzing the technological and economic capabilities of the manufacturers, considering the effects of major changes in consumer demand, and weighing the outcome of that analysis against the need of the nation to conserve energy. This methodology was affirmed in general by the U.S. Circuit Court of Appeals for the DC Circuit when it recently upheld our decision to set the 1986 standard at 26.0 mpg. The court noted that Congress had provided no "precise balancing formula for the agency to apply" to the four statutory criteria, leaving that balancing to the agency's judgment. *Public Citizen v. NHTSA*, 848 F.2d 256, 265 (D.C.Cir. 1988). *See* Section II–A *infra*.

The U.S. auto industry, and GM in particular, continues to be faced with the significant competitive threat of foreign, particularly Asian, manufacturers. The Department of Commerce estimates that U.S. producer sales in the small car segment of the market will decline from an estimated 590,000 vehicles in 1988 to 350,000 in 1990, with the Asian manufacturers gaining the difference with small cars they plan to build in the United States. Further, the Department of Commerce estimates that U.S. auto manufacturers will face growing foreign competition in the mid-size car segment and large/luxury car segment during 1989 and 1990. At the same time, it appears that the larger car segment of the market is shrinking in absolute terms, due in part to the growth of demand for luxury mid-size and compact models. As a result of a shrinking larger car market overall, and a shrinking share of small car sales for U.S. manufacturers, it appears that the U.S. manufacturers must increase their share of the compact and mid-size segments if they are to remain fully competitive in the total automotive market. Of course, these are the market segments where the Asian manufacturers have either recently demonstrated considerable strength, or where they plan additional market penetration with new luxury, "high" performance models (which generally have low fuel efficiency). Although U.S. manufacturers plan new products in this market segment, they will face significantly more competitive pressure than they anticipated when the models were first conceived several years ago. Accordingly, the manufacturers must be able to accommodate consumer demand for such attributes as larger engines, better performance and larger interior space. These actions come at a CAFE price, however, since they generally reduce the fuel efficiency of the model.

At the same time that the domestic manufacturers must gear up for this increased pressure from the foreign manufacturers in a market segment now dominated by the Asians, GM is entering this period after *losing* substantial market share in most market segments. GM argues strenuously that much of its lost market share is attributable to the CAFE law. In order to generate enough fuel economy credits to offset a substantial shortfall from MY 1985, GM argues that it had to exceed substantially the applicable CAFE standard in each of MYs 1986–1988. GM believes that many of its product decisions for those years to improve their overall fuel economy went beyond the bounds of what should be considered "reasonable."

Although U.S. auto employment in the aggregate remained approximately the same from 1986–1988, a closer look reveals a significant trend in the U.S. employment picture: The workers are now being employed in larger and larger numbers by the U.S. outposts of Asian companies, and the number of auto workers employed by U.S. auto makers (particularly GM) is shrinking. At the same time, those workers remaining in the U.S. industry are being told by their employers that their jobs are threatened by the CAFE program. GM has revealed in this proceeding that the jobs of workers at the GM plant in Arlington, Texas, among other plants, may be in danger if the CAFE standard is set at 27.5 mpg. GM has stated that the Arlington plant, which makes the largest cars sold by GM, might be targeted for product restriction or possible closure, if GM is compelled to achieve a 27.5 mpg standard for MY 1989. Several thousand workers, retirees and family members from that plant have written to the agency, urging that the standard be set at 26.5 mpg in order to let them keep their jobs.

It is significant that GM's achievement of 27.6 mpg in MY 1988 can be traced in part to its smaller share of the large car market. While the market share loss may have occurred for a variety of reasons, the results were nonetheless dramatic. The decline in market share led both to a high CAFE last year and to the laying off thousands of workers, estimated by GM to be a loss of 75,000 workers in the past three years.

In contrast, as GM lost market share in the larger car segment, Ford Motor Company stood ready with the capacity to pick up some substantial amount of the mid/large car market segment. Although it is true that the segment is

shrinking overall, it is growing substantially as a share of Ford's domestic fleet. Ford's comment noted that while mid/large cars as a percentage of GM's fleet fell from 65.4 percent in 1986 to 59.7 percent in 1988, Ford's fleet showed an increase in those cars from 49.6 percent to 56.3 percent over the same time period. However, just as GM's market loss produced a CAFE gain, Ford's market gain prevented CAFE improvement: Ford projects a CAFE of only 26.4 mpg for MY 1988 and 26.5 mpg for MY 1989.

In point of fact, it is likely that GM plant closings and the other GM product decisions over the past few years are due in part to overcapacity in the auto industry generally and in part to the market converging on the medium, "compact" car. It is widely reported in the trade press that the Arlington, Texas plant (and other GM plants that make larger cars) are also slated for closure or cutbacks as a result of overcapacity in the larger car market segment. That is, any decisions to close plants may be independent of CAFE concerns. But, the larger car market, while shrinking, is not disappearing in the short term, and it is clear from Ford's experience that the CAFE of a company that serves that market segment will be lower than if the company does not serve that market. This is the segment where the U.S. manufacturers have traditionally been the strongest, but the experience of both Ford and GM over the last few years proves that there is a CAFE price to pay for serving that market, and a price in reduced competitiveness for not serving that market.

This year, we are faced with the possibility of significant erosion in the U.S. industrial base as the manufacturers must compete on the unlevel playing field of an auto market in which U.S. manufacturers, but few foreign manufacturers, must price and market their cars against their own interests, just to achieve a particular CAFE level.

Although NHTSA has been concerned about the competitiveness issues raised by the CAFE program for several years, this concern was underscored by Congress in the recent enactment of the Omnibus Trade and Competitiveness Act of 1988, a bill characterized as the "most comprehensive restructuring of basic U.S. trade policy since * * * 1974." (House Report 100–40, 100th Cong., 1st Sess., 1987.) There, Congress directed that Federal agencies place the highest priority on considering the trade and competitiveness implications of its programs. The House report describes the law as a "response to the serious decline in United States competitiveness." The Committee noted the serious damage that has already been done to our economy as a result of shrinking markets for American products and rapid increases in imports of products into the U.S. In this regard, the Committee stated that—

> Even more troubling is the apparent decline in the international competitiveness of American products. * * * This reflects a number of disturbing developments—ranging from domestic policy failures to foreign trade barriers and distortions—but its ramifications for the future are indeed disturbing. If the United States is unsuccessful in restoring its international competitiveness, we will almost certainly experience a dramatic decline in our living standards and a lessening of our influence throughout the globe to promote American free market values.
>
> House Report at page 3.

Although the Committee was mindful of the generally good condition of the U.S. economy—noting as examples the low interest rates and inflation rate of the past several years—the report states that "these positive signs belie a clear and present danger confronting this country." The danger, the Committee said, is that today's trade deficit must be repaid through future trade surpluses of significant size, and the current competitive posture of the U.S. industrial sector is so weak that it will be difficult or impossible to generate a trade surplus. On this point, the Committee noted,

> Many of the markets already lost to U.S. firms will be jealously protected by our foreign competitors—protected, if necessary, with the help of government resources. Most of our trading partners are now accustomed to running large and persistent trade surpluses with the United States, and they may invoke extreme measures to protect that advantage even in the face of a weakened dollar.
>
> House Report at page 5.

The Committee Report concludes with these observations:

> Ultimately, the trade policy of this country should be designed to ensure economic prosperity, to guarantee a stable industrial and agricultural base, to promote a competitive world economy in which American workers and firms have fair opportunities to compete. * * * This legislation is a recognition of the fact that our Federal Government bears an obligation to protect the rights of its industries and workers in a highly mercantilist world economy. That obligation cannot be discharged by ignoring the difficult decisions. It must be met through assertive but fair actions which will guarantee reciprocal trade around the world.
>
> House Report at page 6.

In the first section of the legislation itself, the Congress found that—

> * * * it is essential, and should be the *highest priority* of the United States Government, to pursue a broad array of domestic and international policies—
>
> (A) to *prevent future declines* in the United States economy and standards of living,
>
> (B) to ensure future stability in external trade of the United States, and
>
> (C) to *guarantee the continued vitality* of the technological, industrial, and agricultural base of the United States.
>
> Section 1001(a)(4), emphasis supplied.

We have taken this Congressional guidance seriously and believe it is consistent with Congress' intentions in enacting the trade law that we redouble our efforts to ensure that the CAFE program does not have adverse consequences for American competitiveness. We also believe that our consideration of the competitiveness effects is entirely consistent with our treatment of this issue in the past several years, which has been to evaluate it in the context of "economic practicability." We believe that a standard of 26.5 mpg strikes the proper balance, pursuing energy conservation while taking into account the anti-competitive effects of a higher standard, consistent with our past practice and the newest Congressional guidance.

II. Background

II–A. Corporate Average Fuel Economy Statutory Provisions

In December 1975, Congress enacted the Energy Policy and Conservation Act (EPCA). One provision of EPCA established an automotive fuel economy regulatory program and was added as a new Title V to the existing Motor Vehicle Information and Cost Savings Act (the Act, 15 U.S.C. 2001 *et seq.*). The program includes corporate average fuel economy (CAFE) standards for passenger automobiles.

Title V specified CAFE standards for passenger automobiles of 18, 19, and 20 mpg, for MY 1978, 1979, and 1980, respectively. The Secretary of Transportation (as delegated to the NHTSA Administrator) was required to establish standards for MYs 1981–1984. For MY 1985 and thereafter, Title V specifies a standard of 27.5 mpg.

However, the Act specifically authorizes the Secretary to amend the CAFE standard "to a level which *he determines* is the maximum feasible average fuel economy level" for each model year. 15 U.S.C. 2002(a)(4) (emphasis added). In determining the "maximum feasible average fuel economy level," the agency is required by section 503(e) of the Act to consider the following four factors: (1) Technological feasibility; (2) economic

practicability; (3) the effect of other Federal motor vehicle standards on fuel economy; and (4) the need of the Nation to conserve energy.

The statute contains no guidance about whether or how the agency should amend a CAFE standard, except that the newly set level must satisfy the four statutory criteria. However, it is clear that the statute vests wide discretion in the Department to set a CAFE standard at a level other than 27.5 mpg. As the United States Court of Appeals for the District of Columbia Circuit stated in upholding the agency's MY 1985 light truck fuel economy standard, "(t)he agency's interpretation of the statutory requirements is due considerable deference and must be found adequate if it falls within the range of permissible constructions." *Center for Auto Safety* v. *NHTSA*, 793 F.2d 1322, 1338 (D.C. Cir. 1986). The court described the setting of the standard as "the result of a balancing process specifically committed to the agency by Congress." 793 F.2d at 1341.

Again in its recent opinion upholding the Department's passenger car CAFE standard for MY 1986, the court stated:

> Congress "specifically delegated the process of setting * * * fuel economy standards with *broad* guidelines concerning the factors that the agency must consider." (emphasis in original). Had Congress offered a more precise balancing formula for the agency to apply to the four § 2002(e) factors, we could more confidently discern the agency's compliance with the congressional mandate. In the absence of a sharper congressional delineation, we are unable to conclude that NHTSA's decision did not represent a "reasonable accommodation of conflicting policies that were committed to the agency's care by the statute" or was "not one that Congress would have sanctioned." *Public Citizen v. NHTSA*, 848 F.2d 256, 265 (D.C. Cir. 1988) (citations omitted).

While compliance with fuel economy standards is determined by averaging the various models produced by each manufacturer, enabling them to produce vehicles with fuel economy below the level of the standard if they produce sufficient numbers of vehicles with fuel economy above the level of the standard, manufacturers may not average their imported cars together with their domestically manufactured cars. Instead, as noted above, manufacturers must meet fuel economy standards separately for their imported and domestically manufactured fleets. (See section 503 of the Act.) Cars are considered to be domestically manufactured if they have at least 75 percent domestic content. Conversely, cars are considered to be imports, or as the statute characterizes them, "not domestically manufactured," if they have less than 75 percent domestic content. One result of this provision is that domestic automakers are unable to take advantage of the higher fuel economy of smaller imported vehicles which they sell, for purposes of CAFE compliance of their domestic fleets.

While a separate fuel economy standard is set for each model year, the Cost Savings Act does not require absolute achievement of the standard by manufacturers within each year. Instead, it allows a shortfall in one year (or years) to be offset if a manufacturer exceeds the standard for another year (or years). Under the Act, as amended by the Automobile Fuel Efficiency Act of 1980, manufacturers earn credits for exceeding average fuel economy standards which may be carried back for three model years or carried forward for three model years. If a manufacturer still does not meet the standard, after taking credits into account, it has committed "unlawful conduct" under section 508 of the Act, and is liable to the Federal government for civil penalties.

In recent years, the Department increasingly has become aware of—and concerned by—the discriminatory effects and adverse impacts of the CAFE program, and of its limited effect on *real* fuel economy. On August 5, 1987, the Secretary of Transportation submitted to Congress draft legislation that would repeal the corporate average fuel economy standards for new model years. The bill would also retain and update the Environmental Protection Agency's (EPA) fuel economy labeling requirements, and revise EPA's automotive fuel economy testing procedures to require that results simulate conditions of actual use.

The Congress has not yet taken any action on the Department's legislative proposal. Unless and until the draft legislation becomes law, NHTSA must continue to administer the law as it is currently written and as it has been construed by the courts. Thus, today's notice is based on that existing law.

II–B. Setting and Implementing the MY 1981–84 Standards

On June 30, 1977, NHTSA published in the **Federal Register** (42 FR 33534) a final rule establishing the MY 1981–1984 passenger automobile CAFE standards. The selected standards were 22.0 mpg for 1981, 24.0 mpg for 1982, 26.0 mpg for MY 1983 and 27.0 mpg for MY 1984. For a description of the analysis underlying those standards, see the August 1988 NPRM, 53 FR 33080, August 29, 1988.

Between January and May of 1979, NHTSA received a number of submissions from Ford and General Motors on the 1981–1984 fuel economy standards for passenger automobiles asserting that those standards should be reduced. In response to these submissions, the agency published a document entitled "Report on Requests by General Motors and Ford to Reduce Fuel Economy Standards for MY 1981–85 Passenger Automobiles." DOT HS–804 731, June 1979. The report concluded that the standards were technologically feasible and economically practicable and noted that both companies had submitted product plans for meeting the standards. Report, p. 14.

One year later, the nation was in the midst of another energy crisis, brought on by events in Iran. Gasoline prices were rising rapidly, creating significantly increased consumer demand for small cars. The U.S. city average retail price for gasoline rose from 88 cents per gallon in 1979 to $1.22 in 1980. (In 1986 dollars, this increase was from $1.33 in 1979 to $1.63 in 1980.) In light of these changed conditions, the industry announced plans to significantly exceed the 27.5 mpg standard for 1985. Both Ford and GM, as well as Chrysler and American Motors (now a part of Chrysler), indicated that they expected to achieve average fuel economy in excess of 30 mpg for that model year. Product plans submitted to NHTSA by those companies indicated that the projections assumed significant mix shifts toward smaller cars and rapid introduction of new technology.

Conditions affecting fuel economy changed dramatically in the early 1980's, following completion of decontrol of domestic oil and other external factors increasing available supplies. Gasoline prices did not continue to rise but instead declined over time. This, combined with economic recovery, caused consumer demand to shift back toward larger cars and larger engines. Data submitted to the agency by GM and Ford in mid-1983 indicated that instead of achieving fuel economy well in excess of the 27.5 mpg standard for MY 1985, they would be unable to meet the level prescribed by the standard.

II–C. Rulemakings to Amend the MYs 1986–1988 CAFE Standards

In response to petitions from GM and Ford, the agency exercised its statutory discretion and in two separate rulemakings set the MY 1986 and MY 1987–88 passenger automobile CAFE standards at the maximum feasible level, 26.0 mpg. (For MY 1986, see 50 FR 40528, October 4, 1985; for MY 1987–88, see 51 FR 35594, October 6, 1986.) (The agency denied petitions by Mercedes-Benz and GM to amend retroactively the

MYs 1984–85 passenger automobile CAFE standards. (See 53 FR 15241, April 28, 1988))

The rulemakings reducing the MY 1986–1988 CAFE standards were consistent with the Cost Savings Act and its legislative history, both of which clearly indicate that NHTSA has the authority to reduce fuel economy standards. The determination of maximum feasible average fuel economy level is made as of the time of the amendment. The agency has emphasized, however, that it could not reduce a standard under the Act if a current inability to meet the standard resulted from manufacturers previously declining to take reasonable steps to improve their average fuel economy as required by the Act.

For MY 1986, the agency evaluated the manufacturers' past efforts to achieve higher levels of fuel economy as well as their immediate capabilities. Based on the information received, the agency concluded that Ford and GM, constituting a substantial part of the industry, had taken or planned appropriate steps to meet the 27.5 mpg standard in MY 1986 and made significant progress toward doing so, but were prevented from fully implementing those steps by unforeseen events. The decline in gasoline prices, which began in 1982, had been expected to be temporary and quickly reverse, but instead continued. The agency concluded that, among other things, there had been a substantial shift in expected consumer demand toward larger cars and engines, and away from the more fuel-efficient sales mixes previously anticipated by GM and Ford. The agency's analysis indicated that this shift was largely attributable to the continuing decline in gasoline prices and that the only actions available to those manufacturers to improve their fuel economy in the remaining time for MY 1986 would have involved product restrictions likely resulting in significant adverse economic impacts, including sales losses well into the hundreds of thousands and job losses well into the tens of thousands, and unreasonable restrictions on consumer choice. That action was recently upheld by the DC Circuit Court of Appeals as consistent with the provisions of the Act and within the agency's discretion. *Public Citizen v. NHTSA*, 848 F.2d 256, 264 (D.C.Cir. 1988).

For MY 1987–88, the agency set the standards at 26.0 mpg. The agency determined that manufacturers had made reasonable efforts at compliance, but that these efforts had been overtaken by unforeseen events, whose effects could not be overcome by available means within the time available. NHTSA stated:

> [B]oth GM and Ford have continued to make significant technological improvements in their fleets and have had reasonable plans to meet CAFE standards. In a situation where unforeseen events, including changes in consumer demand or changes in the competition's product offerings, overtake a manufacturer's reasonable product plan, the agency does not consider it consistent with the Act to "hold" the manufacturer to carrying out a product plan that has become economically impracticable. (51 FR 35611)

In evaluating the reasons for GM's and Ford's declining MY 1987–88 CAFE projections, the agency noted that the companies appeared to be applying the same technologies as planned in late 1983. In the case of GM, NHTSA stated that the two major reasons for the decline in GM's CAFE projections were net engine and model mix shifts and engine and transmission improvement programs not yielding projected gains. The great majority of the factors reducing Ford's CAFE projections were due to net shifts in projected sales for models and engines, engine efficiency improvements not yielding projected gains, and new models not meeting initial weight targets. The agency thus concluded that the major reasons for the decline in both GM's and Ford's MY 1987–88 CAFE projections were largely beyond those companies' control. (51 FR 35610) NHTSA's analysis further indicated that the only actions then available to those manufacturers to raise the fuel economy of their domestic fleets to 27.5 mpg in MY 1987–88 would involve a combination of (1) product restrictions likely resulting in significant adverse economic impacts, including substantial job losses and sales losses and unreasonable restrictions on consumer choice, and (2) transfer of the production of large cars outside of the United States, thereby costing American jobs, while having no energy conservation benefits. (51 FR 35594)

II–D. Petitions To Amend the MY 1989–90 CAFE Standards

The agency received five petitions to amend the passenger car CAFE standards for MY 1989–90. The petitioners included the Automobile Importers of America, Inc. (AIA), GM, Mercedes-Benz, Austin Rover, and the Competitive Enterprise Institute (CEI). All of the petitioners sought rulemaking to set those CAFE standards below 27.5 mpg, with four of them requesting a lower standard based on the reported prospective inability of automobile manufacturers to meet the statutorily set standard of 27.5 mpg. The fifth petitioner requested a lower standard based on the contention that the CAFE program has caused an increase in motor vehicle fatalities.

III. NPRM for MY 1989–90

On August 29, 1988, NHTSA published in the **Federal Register** (53 FR 33080) an NPRM to amend the MY 1989–90 passenger automobile average fuel economy standards, within a range of 26.5 mpg to 27.5 mpg for each model year. The agency invited and received both written and oral comments on the proposal. A public meeting was held on September 14, 1988, in Washington, DC, to receive the oral comments. Among other things, the NPRM summarized, and responded to, the five petitions cited above.

Due to limited remaining time for amending the MY 1989 standard following its receipt of important additional manufacturer submissions in early August, NHTSA provided an abbreviated comment period for the proposed MY 1989 standard, which closed on September 15, 1988. The agency provided a 60-day comment period for the proposed MY 1990 standard, which closes on October 28, 1988.

IV. Public Comments

Comments were received from numerous commenters, including Federal agencies, vehicle manufacturers, vehicle dealers, manufacturer associations, unions, members of Congress and State legislatures and members of the general public. Some parties strongly supported a reduction in the MY 1989 passenger automobile CAFE standard, while others strongly opposed such action.

Petitioner GM urged the agency to amend the MY 1989 CAFE standard to 26.5 mpg "so as to lessen the competitive distortions and inevitably severe consequences for American workers that would accompany attaining the statutory 27.5 mpg level." GM said that market conditions it faces today are more intractable than in earlier years. According to GM, it has become an "overachiever" in response to the competitive distortions caused by the CAFE program, which has resulted in loss of market share and volume to competitors. GM emphasized that, while it improved the fuel efficiency of its fleet during MY 1986–88, its continued CAFE progress results from "random testing benefits on top of 'ultra-reasonable' efforts" which GM stated cannot be sustained indefinitely without further jeopardizing GM production and jobs. GM urged the agency to realize that

GM's CAFE improvements during recent years do not disprove the reasonableness of its competitors' efforts. In discussing the potential impact of retaining a standard of 27.5 mpg, GM drew a distinction between "compliance" with the statute, which may involve the use of credits to make up the difference between the CAFE of a manufacturer's fleet of cars and the standard, and "meeting the standard," which necessitates producing a fleet that year whose CAFE at least equals the standard without reference to credits. GM noted that while its compliance plan was based in part on applying credits, but not on closing any plants, its producing a fleet of cars that actually achieved 27.5 mpg in MY 1989 would necessitate such closings. GM stated that even without plant closings, jobs losses were possible to the extent that its compliance plan included measures that resulted in "competitive distortions."

In its comment supporting a lowering of the CAFE standard, Ford said that it projects its 1989 CAFE level to be about 26.5 mpg. Ford said its inability to meet the 27.5 mpg CAFE standard for 1989 is not because of lack of effort, but instead is due to substantial market and economic changes. According to Ford, it did not anticipate the market conditions, i.e., lower gasoline prices and interest rates, that have contributed to today's popularity of larger cars and higher-performance engines. Ford said that the company realized in 1986 that it might not be able to achieve the 27.5 mpg standard for MY 1989. However, Ford stated that the actions necessary to raise its projected 26.5 mpg CAFE level did not accord with its product development lead time requirements, nor were such actions economically practical. Ford emphasized that the CAFE standard limits the company's ability to improve customer satisfaction and meet market demand. Ford said that exercise of this ability, which is responsible for much of the company's recent success, could be constrained so that foreign manufacturers will gain competitive advantages in the large and luxury car market.

The Automobile Importers of America (AIA) urged NHTSA to expand the scope of its inquiry in determining whether manufacturers made reasonable efforts to meet the CAFE standard. In particular, AIA asked that NHTSA consider "the significant market segment which encompasses larger, better performing cars" in the agency's assessment of reasonable efforts, instead of only that market segment that represents a substantial share of the industry. AIA also said that the agency should provide "adequate notice" to manufacturers of any changes in the reasonable efforts test so that they can conform their actions to the agency's expectations.

AIA's belief that NHTSA should consider the efforts of limited line manufacturers to meet the CAFE standard was shared by several European manufacturers. In urging NHTSA to set the standard at 26.0 mpg in this rulemaking, BMW said that limited line European manufacturers such as itself have "particular * * * compliance difficulties" in meeting the CAFE standards due to the demand for high performance vehicles in BMW's market "niche" in this country. Volvo supported a reduction of the standard to 26.5 mpg. It said that it has already introduced almost all the fuel economy-related improvements envisioned by Congress in 1975, and that it is not possible to make major changes that could significantly improve the fuel economy of its MY 1989 vehicles given the relatively long lead times that are needed to create or significantly alter its product lines. Volvo also noted its fuel economy was affected by the weight not only of the safety features added in compliance with the Federal motor vehicle safety standards, but also of the safety features voluntarily added.

In its comments, Mercedes-Benz stated that NHTSA has misinterpreted the term "industrywide considerations." Mercedes said that Congress "did not intend * * * that the Agency's assessment of technological and economic capability should turn on a model mix analysis that is inherently biased in favor of a few large manufacturers." Instead, stated Mercedes, NHTSA is obliged to consider the capabilities of "the entire universe of manufacturers" when setting an "industrywide" standard. Mercedes said that NHTSA did not adequately explain why the agency would decline to base a determination of reasonable efforts or maximum feasible level solely on a market segment that does not represent a substantial share of the market. Mercedes argued that unless NHTSA imposes a standard that is attainable by limited line manufacturers, the agency will be acting in an arbitrary and capricious manner in penalizing those manufacturers that have no small cars to balance against their large cars.

The National Automobile Dealers Association (NADA) supported a reduction in the 1989 standard to a level that will "assure continued consumer choice through unimpeded product availability." While NADA did not recommend a particular level at which NHTSA should set the 1989 standard, NADA stated that the CAFE level should "preserve the ability of consumers to purchase and dealers to sell those large or more powerful vehicles demanded by consumers." Mr. William Hancock of Autochoice shared the view expressed by many other commenters that customers today are more interested in comfort and performance than in fuel economy, and that consumer demand has made it difficult for the domestic automobile industry to meet a 27.5 mpg standard.

The Recreational Vehicle Industry Association (RVIA) and several other commenters stated that continuation of the 27.5 mpg standard could create a lack of tow vehicles to safely pull travel trailers and other items of equipment. The American Motorcyclist Association believed that a lowering of the standard could facilitate the manufacture of a "modestly priced, decently powered" automobile suitable for towing motorcycles on trailers.

The Department of Energy's (DOE) comments focused on whether General Motors could achieve the 27.5 mpg standard in MY 1989. However, DOE also said it "remains unconvinced that the [CAFE] standards are useful in actually achieving energy savings in today's market." DOE analyzed GM's 1989 fuel economy capability. GM achieved a CAFE of 27.6 mpg in 1988. Since GM is continuing to improve its products, DOE expected GM's CAFE to reach or exceed 27.6 mpg in 1989. DOE noted that GM's projected inability to meet even the 27.5 mpg standard in 1989 appeared to be largely a result of decreasing projected fuel economy at the detail level of model/engine/transmission. Based on the information presented in the NPRM, DOE commented that it appeared that although the majority of the projected CAFE decline is due to decreasing CAFE estimates for existing makes and engines, the reasons for this phenomenon were not explained in the NPRM.

DOE disagreed with NHTSA's analysis of fuel economy technology that had concluded that "no great amount of new technologies is expected to be available between now and 1990." DOE stated that there are proven technologies in widespread use not considered in the NPRM that could have been used by GM to improve fuel economy beyond present levels. Two important technologies are the four valve engine and engine friction reduction. DOE estimated that these two technologies alone can improve

automotive fuel economy by an estimated 20 percent. In any event, according to DOE, the fact that GM will exceed 27.5 mpg by 0.1 mpg in 1988 demonstrates the technological feasibility of the MY 1989 standard.

DOE further noted that the trade-off between fuel economy and vehicle performance is germane to the NPRM, but the information and analysis presented are insufficient to determine the impact of increased consumer demand for performance on fuel economy. DOE cited an analysis of the Environmental Protection Agency showing that with technology remaining constant, a 10% increase in horsepower will cause a 2–3% loss of fuel economy. DOE said that it needs to be shown how much impact increased horsepower will have on GM's capability to meet the existing standard for MY 1989. A second important issue is whether vehicles with slightly lower performance and slightly higher MPG would cause a significant loss in market share or sales for GM.

DOE also commented on transportation's role in U.S. oil use and the importance of rising fuel efficiency. DOE noted that the transportation sector is crucial to the Nation's energy security problem since its petroleum use exceeds total domestic production. Excluding petroleum used as an industrial feedstock, the 11 mmB/D of motor fuel use comprises 80% of total U.S. oil use and 90% of light product use. Oil demand forecasts referenced in the NPRM assume continued new car and light truck fuel economy improvement. Without this improvement, DOE said that future oil consumption and the problems of oil import dependence will be greater.

While the Council of Economic Advisers (CEA) indicated its support for the Secretary's proposal to repeal the CAFE standards for all new model years, the CEA recognized that NHTSA is required to administer the CAFE statute as it currently exists. CEA accordingly recommended that NHTSA set the MY 1989 CAFE standard at 26.5 mpg since the commenter believed setting the standard at this level would "reduce the aggregate economic cost." CEA argued that a CAFE standard of 27.5 mpg would have an economically impracticable impact on the productivity and competitiveness of the U.S. automobile industry and on the level of employment in that industry. CEA also emphasized its belief that safety is adversely affected by shifts to smaller, more fuel-efficient automobiles. It cited an article by Robert Crandall and John Graham (*see*, discussion of CEI petition, *infra*) to support CEA's contention that increased fatalities and injuries result from manufacturers' responses to CAFE standards. CEA argued that the increased fatalities and injuries make the standards economically impracticable. CEA said this was particularly so since fuel savings and any associated emissions reductions are of questionable magnitude. CEA said that NHTSA should make clear what economic value NHTSA is imputing to the alleged adverse safety consequences in the agency's analysis of economic practicability. CEA noted that setting the standard at 26.5 mpg instead of 27.5 mpg "would, if Crandall and Graham are correct, result in between 600 and 1,100 fewer deaths and between 3,100 and 5,600 fewer serious injuries over" the lifetime of the MY 1989 autos.

The Bureau of Economics of the Federal Trade Commission (FTC Staff) submitted a theoretical model that estimates the production shifts, price changes, employment and fuel consumption effects that would result from a 27.5 mpg CAFE standard. The FTC Staff analysis concluded the following:

> We estimate that imposing a 27.5 MPG standard instead of a 26.6 MPG standard in MY 1989 would cost consumers almost $650 million (because of increased prices for large cars with low MPG ratings) in MY 1989. Domestic auto industry profits would fall by about $1.553 billion that same year. Total employment in domestic auto and auto-related industries would likely decline about 11,500 jobs. Meanwhile, we estimate that the higher standard would, by decreasing the retirement rate for existing large cars and increasing the rates of production and utilization of new small cars, actually increase gasoline consumption by a total of approximately 245 million gallons over the next 15 year period following the imposition of the standard.

NHTSA notes that one of the assumptions of the FTC staff analysis was that "(a)bsent the standard, GM expects to reach 26.86 mpg in MY 1989 * * *." That agency also stated that "(s)hould GM prevail in its current court challenge, and win additional CAFE mileage credits, it expects to reach 27.1 mpg in MY 1989 * * *." NHTSA notes that the difference between the 26.86 mpg and 27.1 mpg figures cited by FTC appears to be the Environmental Protection Agency test adjustment credits. As discussed below, the test adjustment credits are provided to compensate for the effects of past test procedure changes. The credits for MY 1989 were not dependent on GM prevailing in its court challenge, which NHTSA assumes refers to the case of *Center for Auto Safety v. Thomas*. GM's current MY 1989 projection is in fact 27.2 mpg, a figure which includes the test adjustment credits. NHTSA also notes that it is not correct to characterize GM's projection as what it would achieve "absent the standard," since GM's projection reflects a product plan that was devised in response to the 27.5 mpg standard. A further discussion of this issue is provided below.

The U.S. Department of Commerce (DOC) believed that the 1989 MY standard should be set at 26.5 mpg, stating that retaining a 27.5 mpg standard would have a significant adverse effect on the competitiveness of the U.S. auto industry and on employment in this country. DOC said that its analysis showed that a large part of the U.S. automobile industry will be unable to produce a fleet of cars that achieves the 27.5 mpg standard unless it reduces its domestic fleet product offerings and adjusts its output mix, which in turn would have economically damaging consequences for U.S. automobile producers, workers and consumers. DOC said that these compliance difficulties arise in part from the fact that the manufacturers "face a market strongly influenced by significantly reduced gasoline prices. Today's real price of gasoline is lower than at any time since the mid-1970's." DOC estimates that severe competition in the small car market will cause U.S. producer sales to decline from an estimated 590,000 vehicles in 1988 to 350,000 in 1990, and will limit the ability of full-line U.S. producers to use price incentives to stimulate small car sales to meet a 27.5 mpg standard for their domestic fleet. Further, DOC said that U.S. manufacturers will also face increasing foreign competition in the mid-size/intermediate and large/luxury car markets during 1989 and 1990, and it will become increasingly difficult for full-line manufacturers to use price discounting of their smaller cars to shift effective consumer demand in the direction of small, domestically-manufactured cars. DOC believes U.S. producers need greater freedom to compete in the extremely competitive automobile market that it forecasts than would be permitted by a 27.5 mpg standard. That department also believes that maintaining a 27.5 mpg CAFE standard would not produce important benefits for the country's energy security.

A variety of other groups urged that the MY 1989 CAFE standard be reduced. Consumer Alert urged relaxation of CAFE standards, although it did not suggest any specific level. That group's primary concern was that higher CAFE standards lead to smaller cars, which

inevitably lead to increased highway fatalities. They urged NHTSA to disclose the number of fatalities resulting from the imposition of 26.5 mpg or 27.5 mpg for MY 1989.

The National Safety Council did not state an opinion whether the CAFE standard should be amended. Expressing concern about the effect of CAFE standards on car weight and safety and about the possibility that a lower CAFE standard would lead to more high performance, high speed cars, that group urged NHTSA to conduct a comprehensive analysis of the safety question.

The Competitive Enterprise Institute (CEI) cited reports and safety literature to support its assertion that large cars are safer than small cars. Particular reliance was placed on the work of Robert Crandall and John Graham. The CEI argued that CAFE standards produce a reduction in weight of the vehicle population and thereby increase the number of highway deaths and injuries. That group dismissed as speculative the possibility that less stringent CAFE standards would lead to a resurgence of "performance" cars which will adversely affect safety. The CEI further commented that the fleet of performance cars was too small to serve as an offsetting factor in discussing CAFE's net impact on traffic safety.

Testimony was presented by Robert W. Crandall of the Brookings Institution, and John D. Graham, Associate Professor at the Harvard School of Public Health, who coauthored an often-cited study that found excessive fuel economy standards can adversely affect automobile safety. Their study was submitted as an attachment to CEI's rulemaking petition earlier this year and is part of the record of this rulemaking.

Robert Crandall testified in opposition to any CAFE standard other than one at the level of CAFE which would be produced by a free market. He summarized his research with Graham, which suggested that a 1989 CAFE standard of 27.5 mpg would increase occupant fatalities by 14 to 27 percent, assuming 1985 gasoline price expectations were fulfilled. In contrast, a 26.5 mpg CAFE standard would lead to an increase in occupant fatalities of 8 to 16 percent, assuming that vehicle producers have sufficient time to adjust their vehicle designs. Crandall noted that designs for 1989–1990 passenger car weights were already locked into place, but argued that adoption of the higher CAFE standard would lead manufacturers to raise prices on large cars and reduce prices on small cars in order to meet the standard. He said that such government-imposed distortion in vehicle offerings would lower new car sales, while drivers of older gas guzzlers, unaffected by CAFE, would continue to buy more gasoline. Finally, Crandall said that the Nation's need to conserve energy was declining and said that the Secretary of Transportation may reduce CAFE standards if he makes such a determination about the national need to conserve.

John D. Graham spoke as a public health professional with concerns about the adverse effects of fuel economy standards on the incidence and severity of crash-related injuries. He supplemented Crandall's comments with three points. First, he recommended that DOT use this rulemaking proceeding to publicly acknowledge the adverse effects of CAFE standards on vehicle safety. If DOT does not believe CAFE adversely affects safety, he said that it should publish the rationale for that conviction. Second, safety is an important consideration in determining the proper standards for 1989 and 1990. He asserted that a stricter standard will force manufacturers to manipulate marketing and pricing programs in favor of lighter, less crashworthy vehicles. Third, he argued that there is no scientific basis for believing that CAFE will make beneficial contributions to vehicle safety. Finally, he noted that the Crandall-Graham study predicts that CAFE will be responsible for 2,200 to 3,900 additional fatalities over the life of 1989 models.

The Insurance Institute for Highway Safety (IIHS) examined the relationship between CAFE standards and vehicle safety. The IIHS urged NHTSA to evaluate the overall safety effect of CAFE requirements, and not, as was done in the past, assume that these requirements had no significant effect on future deaths and injuries in motor vehicle crashes. The IIHS comments concluded that the present CAFE standard imposes constraints on car manufacturers, and these constraints affect safety. To the extent that these constraints increase the production of cars that are small (in terms of size, not weight), that effect is negative, but if the standard also restricts the production of high performance cars, that effect is positive. IIHS did not express a judgment as to which effect would be greater.

Two staff members of the Heritage Foundation, writing to express their personal opinions, urged NHTSA not to allow the CAFE standard to rise to 27.5 mpg. In addition to generally restricting consumer choice, they stated that the higher standard could trigger a loss of tens of thousands of jobs in the U.S. automobile industry. In determining "maximum feasible" average fuel economy, they argued NHTSA should consider safety in considering technological feasibility and economic practicability. They felt it NHTSA's duty to estimate the likely safety effect of any CAFE level selected, including, if possible, the number of lives placed at risk. Although this did not mean NHTSA could not adopt a standard with a negative effect on safety, they said that the agency should, in such a case, describe why safety would be outweighed by other considerations.

The United Automobile, Aerospace & Agricultural Implement Workers of America (UAW) supported continued efforts to conserve non-renewable resources such as fossil fuels. At the same time, it expressed concern about the employment implications of requiring compliance with the statutory 27.5 mpg standard for MY 1989. (See the discussion above of the testimony of UAW President Bieber regarding the incentive created by the law for the domestic manufacturers to outsource production of their larger cars.)

Other groups opposed any reduction in the MY 1989 standard from the 27.5 mpg statutory level. The American Council for an Energy-Efficient Economy (ACEEE) opposed any rollback in the CAFE standard. ACEEE argued that reducing CAFE standards would lead to higher oil consumption and imports, which in turn would reduce national security, increase the trade deficit, increase air pollution levels and generate more climatic change. Because of recent experience and developments within the auto industry, ACEEE said that there is no reason why GM and other domestic manufacturers could not meet a 27.5 mpg CAFE standard in MY 1989, given reasonable efforts. The organization stated that maintaining a 27.5 mpg CAFE standard could help protect jobs in the United States, and would not have to be at the expense of auto safety.

The Center for Auto Safety (CFAS) argued that strong CAFE standards save American jobs and that relaxation of the 27.5 mpg CAFE standard would cost jobs. The Center estimated that when CAFE standards were set at 26.0 mpg for 1986–1988, GM and Ford exported production of over 500,000 small cars annually at a loss of 175,000 jobs in the U.S.

The Americans for Energy Independence (AEI) argued that a reduction in CAFE standards is bad policy. Their major concern was that oil consumption levels in the U.S. thwarted energy independence. As the transportation sector accounted for 60%

of American oil consumption, the AEI argued that conservation gains in transportation could be enough to offset oil production losses in the 1990's. Because cars account for most of the oil consumption in transportation, AEI said that more must be done to conserve oil consumption in cars.

The Energy Conservation Coalition (ECC) strongly opposed any reduction of the CAFE standards. The ECC questioned NHTSA's determination that a standard below 27.5 mpg would be the "maximum feasible" level.

The Natural Resources Defense Council (NRDC) strongly urged that the CAFE standard for MY 1989 remain at the 27.5 mpg level. They expressed strong disagreement with NHTSA's determination that the proposed action will result in "insignificant" environmental impacts, and that no Environmental Impact Statement was necessary. Most of NRDC's comment focused on NHTSA's alleged failure to comply with the National Environmental Policy Act and on the perceived inadequacies of the Environmental Assessment.

The Fossil Fuels Policy Action Institute endorsed the comments of NRDC, ECC and CFAS, while noting concern for the safety arguments raised by CEI.

Congressional correspondents were divided on the proposal. Senate Majority Leader Byrd, House Speaker Wright and more than 50 other members of Congress wrote letters in support of lowering the CAFE standard for MY 1989, stating that the CAFE program has created some serious problems for domestic manufacturers of full-line automobiles. Congressman Carr testified at the public hearing in this proceeding, and Congressman Oxley submitted written testimony, in support of reducing the standard. These members believe that CAFE is jeopardizing the production of many popular American-made, family-size sedans and station wagons, threatens the loss of American jobs, restricts consumer choices, and can also adversely affect automotive safety. In addition, Congressman Dingell, Chairman of the House Committee on Energy and Commerce, supported reduction of the MY 1989 standard, saying that such action would "help preserve U.S. jobs in the auto industry and its suppliers consistent with the Congressional objectives of the U.S. Trade legislation recently enacted into law, particularly section 1001(a)(4)." Chairman Dingell raised several other issues, noting reports that large cars are generally safer than small ones and suggesting that any possible contribution of this fuel economy rulemaking to the greenhouse phenomenon was too remote and small to be relevant.

Senator Wirth submitted written testimony opposing the proposed lowering of the fuel economy standard, citing a need to promote the efficient use of fuels in order to trim this country's growing dependence on oil imports and begin addressing major environmental problems facing our nation and the rest of the world. Approximately 20 other members of Congress expressed strong opposition to lower CAFE standards for MY 1989. In light of rising oil imports, a severe trade deficit, and the threat of catastrophic global climactic change due to the burning of fossil fuels, several members urged this agency to raise CAFE standards above 27.5 mpg, not lower them.

Sixty-four state legislators, eight mayors, eight state officials, and the Governors of Indiana, Michigan, Missouri, Tennessee, and Wisconsin also wrote to Secretary Burnley urging a CAFE standard of 26.5 mpg for MY 1989.

Finally, thousands of letters were received from the general public and from GM employees, the majority of them supporting a 26.5 mpg standard.

V. Agency's Analytic Approach

The agency is following the same basic analytic approach it used in the MY 1986 and MY 1987–88 rulemaking proceedings when it also considered setting the standard below 27.5 mpg. This approach can be described as a two-prong analysis. First, the agency assesses whether the industry (or a company representing a substantial share of the industry) has taken reasonable steps to achieve the statutory goal of 27.5 mpg, the standard that would apply in the absence of an amendment by this agency. This assessment, which GM describes in its comments as "an auditing device," is used by the agency to help it determine whether there is any reason why it should exercise its discretion to amend the statutory standard. If the agency is satisfied that manufacturers did make reasonable efforts to achieve 27.5 mpg, then the agency focuses on the second prong of the analysis: Setting the standard at the "maximum feasible" fuel economy level, taking into account the four statutory criteria: Technological feasibility, economic practicability, the effect of other Federal motor vehicle standards on fuel economy and the need of the nation to conserve energy. To the extent that the "reasonable efforts" test is met, and the "maximum feasible" level is below 27.5 mpg, the standard would be reduced to the new, maximum feasible level. This methodology and comments specifically addressing the methodology will be discussed in this section. Comments directed to the application of the methodology (such as opinions about the sufficiency of manufacturer efforts to achieve 27.5 mpg or views regarding the maximum feasible level) will be addressed elsewhere in this decision.

V–A. The "Reasonable Efforts" Test

In the model year 1986 proceeding, the agency described the "reasonable efforts" test as follows:

> * * * Since the Cost Savings Act imposed a long-term obligation on manufacturers to achieve a 27.5 mpg fuel economy level, it would be inappropriate to reduce the standard if a current inability to meet the standard simply resulted from manufacturers previously declining to take appropriate steps to improve their average fuel economy as required by the Act. Therefore, the agency must evaluate the manufacturers' past efforts to achieve higher levels of fuel economy as well as their current capabilities.
>
> On the other hand, the agency does not consider it appropriate to judge each and every manufacturer product action by 20–20 hindsight. In assessing the sufficiency of manufacturers' fuel economy efforts, it is necessary to take account of the information available to manufacturers at the time product decisions were being made.
>
> Manufacturers had an obligation to take whatever steps were necessary, consistent with the factors of section 502(e), to meet the 27.5 mpg standard. To the extent that manufacturers had plans to meet the standard which subsequently became infeasible due to unforeseen events, NHTSA does not believe the manufacturers should be charged with a failure to make a sufficient effort.
>
> 50 FR 40533 (October 4, 1985; quoted in MY 87–88 rule at 51 FR 35599 (October 6, 1986)).

As noted above, this approach was affirmed recently by the U.S. Court of Appeals (D.C. Cir). *Public Citizen v. NHTSA*, op. cit.

Several commenters addressed the methodology of the agency's "reasonable efforts" test. GM urges the agency to take account of the four statutory criteria, including "economic practicability", when assessing whether manufacturers have made reasonable efforts. GM also believes that a manufacturer's declining CAFE performance does not, by itself, dictate a conclusion that the manufacturer failed to make reasonable efforts to achieve 27.5 mpg. In GM's view, the agency should consider the reasonableness of the manufacturers efforts over the long term, taking into account the enormous improvements in automobile fuel efficiency of the past decade, because these large improvements make it more difficult for manufacturers to continue to

make further improvements. GM specifically urged NHTSA to "take care not to abandon the methodology that was developed in its first passenger car amendment proceeding."

GM emphasizes that it has focused on the "sequencing" of the two steps of NHTSA's analysis as articulated in the first passenger car amendment proceeding. In other words, GM placed great importance on the *order* in which NHTSA conducts the two prong analysis, noting that the "reasonable efforts test" should not be a "threshold condition that presumes the validity of a standard whose maximum feasibility has never been determined." GM urges NHTSA to conclude that " 'reasonable efforts' to improve fuel economy do not become unreasonable simply due to the passage of time." GM also urges NHTSA to conclude that, once manufacturer efforts are found to be reasonable, *"no* additional actions should be expected of them," regardless of the timing of the manufacturer's identification of compliance difficulties. GM expresses puzzlement about the agency's references to a "second round of investments or product decisions." In sum, GM urges NHTSA to remain faithful to the analytic approach it articulated in the MY 1986 proceeding.

Ford's comments imply a continuing fundamental disagreement with the application of the "reasonable efforts" test, noting that such a requirement "is not found in the statute." Ford argues that setting a standard above the capacity of a manufacturer in a given model year could violate Congressional intent, whether or not the capacity is affected by the prior efforts of that manufacturer. Ford analogizes the "reasonable efforts" test to an "exercise in second guessing based on hindsight." which Ford believes is inappropriate. Ford also complains that there are "no stated guidelines used in applying this test," rendering the test "undefined" and "subjective."

The Automobile Importers of America complain that the "reasonable efforts" test as articulated in the NPRM for MY 1989–1990 departed in some material way from the "sufficient efforts" test described in the agency's first rulemaking proceeding to reduce a passenger car CAFE standard (MY 1986). AIA argues that there is no requirement in the statute or the legislative history for NHTSA to examine manufacturers' efforts under a "reasonable efforts" test. AIA also complains about the lack of an "articulate standard of what constitutes reasonable efforts." AIA also objects that NHTSA appears to have elevated the "reasonable efforts" test to a "threshold question" that would govern "even the institution of a Model Year 1989 rulemaking." This, maintains AIA, would be a change from prior year proceedings. AIA would like the agency to define the test as "reasonable efforts to improve the fuel efficiency of a vehicle in light of consumer demand and normal business considerations."

Responding first to the general comment of GM and AIA that NHTSA may have changed its view of the "reasonable efforts" test since the MY 1986 proceeding, NHTSA assures the commenters that it neither changed its methodology, nor did intend to signal any change in it. In that regard, NHTSA agrees with both GM and AIA that the original methodology need not be changed, since in our view, it has served well. While we acknowledge that some terminology has shifted, that is due as much to others (such as the D.C. Circuit Court of Appeals) using different words as it is to NHTSA's own differing terminology. The agency neither sees nor intends any difference among terms such as "reasonable efforts," "sufficient efforts," or "reasonable plans to achieve 27.5 mpg." The agency means no difference by the different terms, and does not intend to imply any change in the methodology it articulated in the MY 1986 proceeding.

With respect to GM and AIA's concerns about the sequencing of the two prongs of the analysis, the agency does not agree that there is any substantive significance to the sequence of the analyses, and therefore does not agree that there is any importance to be attached to the apparent "elevation" of the "reasonable efforts" test in this proceeding. In fact, the agency continues to place great importance on both prongs of the analytic approach, and notes that the sequence of conducting the two analyses should make no difference at all in the outcome of the proceeding. On the other hand, there is potentially a significant savings in NHTSA resources as well as resources of the public that elects to comment on our proceedings, if we first conduct the analysis that appears less likely to support an amendment of the standard. Then, if the analysis turns out to support an amendment, the second prong of the analytic approach is conducted. Under some factual settings, the "reasonable efforts" test may appear at first glance to be the one less likely to yield a result that supports amendments; in other cases, the "maximum feasible" evaluation may appear to be less likely to support a value different from 27.5 mpg. In any event, NHTSA intended no substantive change by suggesting that the sequence of the analyses could be reversed, since our traditional approach has always made clear that a negative result under either prong of the analysis would result in no amendment to the standard.

GM specifically, and Ford implicitly, seek a judgment by the agency that it is sufficient to have once made "reasonable efforts" to achieve 27.5 mpg. The agency cannot agree with this suggestion stated as broadly as GM would have it; however, the agency does agree with both companies that there are limits to the doctrine of "reasonable efforts." For example, the levels of investment which manufacturers must make to remain in compliance with the 27.5 mpg level is limited by "economic practicability." With respect to the notion that a single "reasonable effort" is all that is required by the law, the agency simply does not agree. As we have consistently observed since first articulating the "reasonable efforts" test, we believe that the statute imposes a long-term obligation on manufacturers to attempt to comply with the statute, including its prescribed level of 27.5 mpg for model years 1985 and thereafter.

We do agree with GM that the "reasonableness" of a manufacturer's plans to comply must be judged with consideration of factors such as the economic practicability of the elements of the plan. Clearly, the agency does not intend to impose an obligation on a manufacturer to *carry out* a compliance plan, no matter how costly. However, the agency does believe that the statute compels the manufacturers to *have* a compliance plan and, if it is not to be implemented for reasons of cost or feasibility, the manufacturer must pursue additional compliance plans, unless there is no reasonable, alternative compliance plan available in the same time period. And, given the agency's obligation to review (or audit) the compliance plans of the manufacturers, there may be instances when the agency will not agree with a manufacturer about the reasonableness of the compliance plan, either because it projected compliance on the basis of unreasonable assumptions, or because it would not have achieved compliance, even if carried out. Also, the agency may disagree with the manufacturer about the reasonableness of its decision to drop the plan. We do not believe that such disagreements are tantamount to "20–20 hindsight," which we agree is inappropriate in the CAFE regulatory context. However, there is a middle ground between the inappropriate exercise of "20–20 hindsight," and the

mere "rubber stamping" of a manufacturer's statement of its previous intentions to comply. We believe that we have correctly discerned that middle ground in our previous articulation of our view of the "reasonable efforts" test, and we reaffirm that position today.

As to GM's suggestion that a one-time-only compliance plan is sufficient, we do not agree for the reasons stated above. If that plan is stale or overtaken by changing events, and sufficient time reasonably remains for the manufacturer to develop a new compliance plan to achieve the statutory 27.5 mpg goal, we believe that the statute contemplates that the manufacturer will do so.

This view, that manufacturers must continue to make efforts to reach 27.5 mpg, is entirely consistent with the approach described in the MY 1986 decision. In that rule, the agency observed:

> While the agency believes that [certain] product plan changes * * * are consistent with statutory criteria, since they reflect changes in what is economically practicable, manufacturers continue to have an obligation to make all necessary efforts consistent with those statutory criteria to meet CAFE standards. To the extent that changes in product plans result in manufacturers not being able to meet a standard, the manufacturers *must pursue additional means*, consistent with the factors of section 502(e) *to meet* the standard.
>
> (Emphasis supplied). 50 FR 40542, October 4, 1985.

A similar discussion was included in the preamble to the final rule amending the MY 1987–1988 standard, and today's decision reiterates this principle, consistent with the language as it was articulated in 1985.

The agency does not agree with AIA that the agency should examine only the efforts made by a company to improve the fuel efficiency of its vehicles without regard to the target fuel economy of that company. Since the rule reducing the MY 86 standard, we have clearly articulated our view that the agency's assessment of reasonable efforts is viewed in terms of the company's efforts to achieve the statutory target of 27.5 mpg. We do not believe that we could reasonably exercise our discretion to amend the 27.5 mpg standard, if we could not find a company with a lower CAFE projection that was reasonably trying to achieve the 27.5 standard. NHTSA recognizes that several AIA member companies (e.g., limited-line European manufacturers) face severe obstacles in achieving the 27.5 level, not unlike the problems of full-line U.S. manufacturers. That is the result of the fleet averaging requirement, which the agency believes is a fundamental flaw of the statute. However, NHTSA has no choice but to carry out the law as it is written.

Both Ford and AIA object to the subjectivity of the "reasonable efforts" test, suggesting that there are no standards to govern the manufacturers' decisions. Ford suggests that such standards could be developed in a rulemaking proceeding, while AIA makes a similar suggestion that manufacturers should be given some notice of the agency's expectations. However, AIA also acknowledged during the public meeting on this rulemaking proceeding that manufacturers have an obligation—independent of NHTSA's "reasonable efforts" test—to try to comply with the statute, which sets the standard at 27.5 mpg in the absence of regulatory amendment. AIA also agreed that they have had notice at least since 1985 of NHTSA's intention to review the sufficiency of the manufacturers' plans for reaching 27.5 mpg, which is just another way of describing the "reasonable efforts" test.

As to objective standards for such an audit, NHTSA does not agree that it is desirable or necessary (or even practical) to articulate such standards, since the product decisions under review will, in the first place, have been made by the manufacturer. A decision to delete a product or add a less fuel-efficient option may be reasonable for one manufacturer that needs to respond to certain competitive demands, and be unreasonable for another manufacturer. The agency fully agrees with the commenters that the agency should conduct the "reasonable efforts" test by placing itself in the shoes of the manufacturer at the time the product decisions were made, and making a judgment about whether those decisions were reasonable at the time. That is not 20–20 hindsight; however, it does involve a judgment that, as noted above, could differ from the judgment made by the manufacturer about the reasonableness of the product action. But, this "test" is reviewing nothing more than the manufacturer's progress toward trying to meet the statutory standard, an obligation that existed prior to NHTSA's articulation of a "reasonable efforts" test. It is important to keep in mind that NHTSA's "reasonable efforts" test is conducted for a very limited purpose: To decide whether to exercise our discretion to amend the statutorily-set standard. We do this in order to demonstrate to the public and a reviewing court that we exercised our limited discretion under the statute rationally and reasonably.

V–B. The Maximum Feasible Determination

The second prong of the agency's analysis is the determination of "maximum feasible" fuel economy. The agency has always followed the same approach of considering separately each of the four statutory criteria: Economic practicability, technological feasibility, the effect of other federal motor vehicle standards on fuel economy, and the need of the nation to conserve energy. The factors will have different influences on the outcome. Some factors tend to suggest a higher "maximum feasible" level, while others tend to suggest a lower level. Since Congress provided no guidance on the weight to be given any of the factors, we have exercised judgment in order to accommodate the conflicting policies of the statute. And, the weight we give any factor will depend on the circumstances in the nation at the time the decision is made, both with respect to economic health and energy conservation needs. Although many commenters offered opinions about the weight to be given one or more of the factors, no commenter offered substantive opinions about the manner in which the agency has conducted this prong of its analysis. The comments that discuss the weighting of the factors will be addressed in another section of this decision.

In the NPRM, the agency requested comments on the possible situation involving one company that made reasonable efforts, and another company (that had not made reasonable efforts) that has a lower current CAFE capability than the company that did make reasonable efforts. GM suggested that NHTSA should determine the CAFE level that would have been achievable by the company that did not make reasonable efforts, calculated as if it had made reasonable efforts, and compare that level to the level achievable by the company that did make reasonable efforts. GM suggests that the CAFE level should then be set at the lower of the two levels. Ford commented that the agency could violate Congressional intent if it set a standard above the capacity of a major manufacturer, without regard to the question of whether that company made reasonable efforts. Since it happens that we will not be setting the standard higher than the capability of a substantial share manufacturer, we need not resolve here the methodological question.

VI. Manufacturer Capabilities for MY 1989

As part of its consideration of technological feasibility and economic practicability, NHTSA has evaluated the manufacturers fuel economy capabilities for MY 1989. In past fuel economy rulemakings, the agency has focused on the manufacturers current projections and underlying product plans, using the CAFE levels actually achieved in the most recent model year(s) as a baseline. The agency has then considered what, if any, additional economically practicable actions the manufacturers could take to improve their fuel economy, given the available leadtime.

While NHTSA believes that this type of analysis should be part of the evaluation of manufacturer capabilities, it believes that a focus on current CAFE projections and recent CAFE achievements can be overly narrow in some circumstances. In particular, as discussed below, NHTSA is concerned that too narrow a focus on GM's MY 1988 CAFE achievement could have the effect of casting in concrete a significant loss in market share which that company has experienced over the past several years, and the significant job losses which accompanied that market loss. The same result could occur from too narrow a focus on GM's MY 1989 CAFE projection, which reflects a product plan devised in light of a 27.5 mpg CAFE standard. The agency believes that it should also look at the broader picture of how the standard could affect product availability, jobs and the competitiveness of U.S. manufacturers.

VI–A. Manufacturer Projections

GM and Ford have submitted a number of different projections of their MY 1989 CAFE levels over the past several years, reflecting changing product plans and market conditions. This section addresses the manufacturers' latest projections, since those projections reflect the manufacturers' current product plans. The current MY 1989 projections of both GM and Ford are lower than earlier projections. The reasons for the change are discussed below in the section entitled "Manufacturer Compliance Efforts."

The agency notes that one factor that complicates a discussion of manufacturer projections is Environmental Protection Agency (EPA) test adjustment credits. Between 1983 and 1985, EPA engaged in rulemaking to provide CAFE adjustments to compensate for the effects of past test procedure changes, ultimately adopting a formula approach for calculating CAFE adjustments. While the CAFE adjustment differs among manufacturers due to their different vehicle mixes, a typical adjustment for MY 1989 is 0.2 or 0.3 mpg. In the discussion of manufacturer projections in this notice, the projections include the EPA test credit adjustment unless it is noted otherwise.

1. General Motors

GM indicated in its September 1988 comment that its current product plan is expected to result in a MY 1989 CAFE level of 27.2 mpg. GM's projection is the same as that provided to the agency in April 1988.

GM's comment, as well as its mid-model year report for 1988, indicates that its MY 1988 CAFE will be 27.6 mpg. Thus, that company expects its CAFE to decline by 0.4 mpg between MY 1988 and MY 1989. GM provided detailed information explaining the expected decline. The information showed that much of the decline is due to the uncertain effects on fuel economy of new hardware introduced to improve customer satisfaction with that company's 2.8 and 2.5L engines in MY 1989. The information also showed that another reason for the decline is that GM does not expect to replicate better-than-expected 1988 test results on its 2.8L and 3.8L engines, which is attributable to test-to-test variability.

The record for this rulemaking indicates that GM's 27.6 mpg CAFE for MY 1988 is in part due to adverse mix shifts, reflecting lower-than-anticipated sales of that company's larger and luxury cars, and a significant loss in overall market share for that company. GM noted in its August 8, 1988, submission that its share of total U.S. passenger car sales fell three points between 1984 to 1986, and another six points between 1986 to 1988. That company also noted that major contributors to this decline came in its traditionally strong luxury and mid-size market segments. GM stated that this loss of market share caused its active hourly workforce to decline by over 75,000 workers between June 1986 and June 1988, and that total jobs lost at GM and its suppliers due to this decline in market share may have been in excess of 200,000.

Between MY 1985 and MY 1988, the time GM was losing market share, that company's CAFE rose from 25.8 mpg to 27.6 mpg. By contrast, Ford's MY 1988 CAFE level is very similar to its MY 1985 level (a period of rising market share), 26.4 mpg versus 26.6 mpg. In the same period, a number of the import manufacturers' CAFE levels also declined. While the decline in some of the import manufacturers' CAFE levels was relatively small, BMW's CAFE declined from 26.4 mpg in MY 1985 to 21.6 mpg in MY 1988.

GM argued in its August 8, 1988, submission that while the contribution to its lost market share and job losses resulting from efforts to comply with CAFE may be impossible to isolate and quantify, it is no mere coincidence that, during a period when its CAFE performance and projections have been increasing as those of its principal domestic and foreign competitors have been directionally opposite, its percentage of total industry sales has declined. GM stated in its September 1988 comment that as gas prices continued to decline during 1986, the demand for larger cars and for engines with improved performance and driveability continued unabated. That company noted that despite this favorable sales environment, it suffered both an absolute volume decline in full-size and mid-size car production during MY 1986–88 and a substantial loss of market share to its less fuel-efficient competitors. GM observed that its production of full-size cars, which reached more than 1.1 million units in MY 1985, was off by nearly 300,000 units in MY 1988. GM also noted that it introduced two new full-size carlines during this period, among the most fuel-efficient in their class, but sales of its downsized models languished far below projected levels.

GM also suggested that some of its cars, most notably the third-generation E/K models introduced in MY 1986, may have pushed too far in the direction of downsizing and fuel-efficiency at the expense of other attributes considered more important by the consumer. That company added that, ironically, the lost volume of these fuel-efficient larger cars had the effect of improving GM's CAFE still further, while depressing the CAFE of other manufacturers whose share of less fuel-efficient models increased.

NHTSA notes that, for CAFE purposes, GM's MY 1986–88 market behavior does not merely reflect the 26.0 mpg level to which those standards were eventually amended. As indicated above, GM's initial product plans for those model years were made in light of the statutory 27.5 mpg standard expected to be in place. In addition, GM was making every effort during those model years to exceed the 26.0 mpg standard in order to earn sufficient carryback credits to offset a substantial MY 1985 shortfall. Thus, for CAFE *compliance* purposes, GM did not enjoy the flexibility of being content with

achieving a CAFE of only 26.0 mpg for MYs 1986–88, since that could well have resulted in insufficient carryback credits and thus a final determination of non-compliance and a finding of "unlawful conduct" under section 508 of the Act.

GM's current MY 1989 plan, which would likely result in a CAFE of 27.2 mpg, again reflects the company's expectation of the statutory 27.5 mpg standard that would be in effect unless changed through this rulemaking. That company indicated in its August 1988 submission that, looking to the future, it hopes to increase sales of its midsize, larger and luxury models and restore employment with restylings and driveability improvements, albeit while trying to minimize the CAFE penalty that will occur with those changes. GM also indicated at the September 14, 1988 public hearing that it is doing everything it can to try and get its lost market share back, but that it is seriously constrained by CAFE standards in doing that. While GM's current MY 1989 product plan does reflect some technological improvements to improve customer satisfaction, the agency does not believe that it reflects the kinds of actions GM might wish to take to restore market share and jobs if it were not constrained by the 27.5 mpg standard.

2. Ford

Ford indicated in its September 1988 comment it could achieve a MY 1989 CAFE level of "about 26.5 mpg." As noted in the NPRM, Ford estimated in April 1988 that it could achieve a MY 1989 CAFE level of 26.6 mpg. Thus, Ford currently projects essentially the same CAFE level as it did earlier this year. Ford's mid-model year report for 1988 indicates that its MY 1988 CAFE will be 26.4 mpg, or almost the same as it projects for MY 1989.

While GM's MY 1988 CAFE achievement of 27.6 mpg in part reflects a significant loss in market share since 1985, Ford increased its market share during that time period. Ford's comment indicated that its overall market share in 1988 is 21.4 percent, up from 19.7 percent in 1985.

3. Chrysler

Chrysler projected in April 1988 that it would achieve a CAFE of 27.6 for MY 1989. At that time, Chrysler projected a MY 1988 CAFE of 27.8 mpg. In its July 1988 mid-model year report, however, Chrysler indicated that it will achieve a MY 1988 CAFE of 28.4 mpg. NHTSA notes that, as discussed in the MY 1986 and MY 1987–88 CAFE proceedings, Chrysler's CAFE has been higher than that of GM and Ford in recent years primarily because it does not compete in all the market segments in which GM and Ford sell cars (i.e., no "large" cars, which have lower fuel economy ratings than other size classes.).

4. Other manufacturers

The Japanese and other Asian manufacturers are expected to easily exceed the current 27.5 mpg standard for MY 1989, in light of their traditional strength in smaller cars. Also, all of these manufacturers' cars, whether more or less fuel-efficient, are considered imports under the statute, since their domestic content is less than 75 percent, even for those models produced at U.S. plants. Therefore, unlike the domestic manufacturers, the least fuel-efficient cars of the Asian manufacturers are not, for CAFE purposes, in a different fleet from their most fuel-efficient cars. Thus, the fleet averaging requirements of the CAFE law allows those companies' to use the higher fuel economy ratings of small cars to offset those with lower ratings.

Nissan projects a MY 1989 CAFE level of 29.5 mpg to 29.7 mpg. While the agency does not have MY 1989 CAFE projections for the other Asian manufacturers, their MY 1988 CAFE levels, as reported in their mid-model year reports, are well above 27.5 mpg. Daihatsu will achieve a MY 1988 CAFE of about 46.5 mpg, Honda 32.0 mpg, Hyundai 35.0 mpg, Isuzu 32.6 mpg, Mazda 28.7 mpg, Mitsubishi 29.8 mpg, Subaru 31.8 mpg, Suzuki 50.3 mpg, and Toyota 32.6 mpg. The agency notes that some of the Japanese manufacturers have experienced decreases in their fuel economy during recent years as they have begun to sell larger, more performance-oriented vehicles, e.g., Honda, which began marketing the Acura Legend in 1986 in the U.S., has dropped from 34.5 mpg in 1985 to 32.0 mpg in 1988.

The import fleets of GM, Ford and Chrysler are also expected to easily exceed 27.5 mpg for MY 1989. GM projects a MY 1989 CAFE level of 39.3 mpg for its import fleet, and Ford projects a CAFE level of 31.6 mpg. While the agency does not have a MY 1989 CAFE projection for Chrysler's import fleet, that company's mid-model year report indicated that its import fleet will achieve a CAFE level of 30.3 mpg for MY 1988. But as noted previously, the two fleet rule of the statute prevents the three U.S. companies from using those higher fuel economy ratings to offset the lower ratings of the rest of their fleets.

Most of the European manufacturers are expected to be below the 27.5 mpg level for MY 1989. Austin Rover projects a MY 1989 CAFE level of 23.5 mpg, BMW 21.9 mpg, Jaguar 21.7 mpg, Mercedes-Benz 21.0 mpg, Peugeot 24.5 mpg, Porsche 23.5 mpg, Saab 26.6 mpg, and Volvo 25.7 mpg. The agency does not have MY 1989 projections for Alfa-Romeo, Volkswagen or Yugo. Those companies' mid-model year reports indicated that their MY 1988 CAFE levels will be 25.6 mpg, 30.3 mpg, and 33.8 mpg, respectively.

VI–B. Possible Actions to Improve MY 1989 CAFE

The possible additional actions that manufacturers might be able to take to improve their projected CAFE may be divided into four categories: Further technological changes (beyond what is contained in their product plans), increased marketing efforts for their more fuel-efficient cars, restricting the sale of their less fuel-efficient cars and engines, and transferring the production of their less fuel-efficient vehicles, or parts of those vehicles, outside of the United States. GM and Ford have indicated in the past that they might outsource some of their less fuel-efficient cars to enable those cars to be averaged in with their highly fuel-efficient captive imports.

Since the 1989 model year begins this fall, there is insufficient time for the manufacturers to make further significant technological changes in their product plans. For example, once a new design is established and tested as feasible for production, the leadtime necessary to design, tool, and test components such as new body sheet-metal systems for mass production is typically 22 to 29 months. Other potential major changes often take longer.

Similarly, there is insufficient time to transfer the production of less fuel-efficient vehicles, or significant parts of those vehicles, outside the United States before the beginning of MY 1989. However, manufacturers could begin the steps necessary to outsource large car production in a later model year. NHTSA has previously noted that there is a complete absence of energy conservation benefits to the U.S. from outsourcing. In addition, Congress has spoken clearly about its desire that fuel economy standards should not induce manufacturers to increase their importation of foreign-produced cars. Thus, NHTSA has said that it does not consider outsourcing for CAFE purposes to be reasonable and will not require manufacturers to consider outsourcing as part of their "reasonable efforts" to achieve 27.5 mpg. See 51 FR 35604, October 6, 1986.

As to marketing efforts, the agency in the past has concluded that GM and

Ford both have made efforts to promote the sales of fuel-efficient cars and determined that the manufacturers have undertaken extensive and significant marketing efforts to shift consumers toward their more fuel-efficient vehicles and options. The agency also has stated previously that it believes that the ability to improve CAFE by additional marketing efforts is relatively small. As a practical matter, marketing efforts to improve CAFE are largely limited to techniques which either make fuel-efficient cars less expensive or less fuel-efficient cars more expensive. Moreover, the ability to increase sales of fuel-efficient cars largely relates to either increasing market share at the expense of competitors or pulling ahead a manufacturer's own sales from the future. Neither approach produces net energy savings for the U.S. A factor that makes it difficult for the domestic manufacturers to sell domestically produced, fuel-efficient cars is the growing competition of lower-priced small cars from countries such as Yugoslavia and South Korea, which have significant cost advantages.

Another consideration in this area is that the manufacturers' success in improving the fuel efficiency of large cars has itself made it more difficult to sell smaller cars. The reason for this is that there are diminishing returns in terms of greater fuel economy from purchasing small cars as the fuel efficiency of larger cars increases. Similarly, as gasoline prices have declined, there are diminishing returns to the consumer from purchasing more fuel-efficient vehicles. Under current gasoline projections, a one mpg increase in fuel economy from 15 to 16 mpg would decrease lifetime operating costs by about $371. By contrast, at a CAFE level of 26.5 mpg, the corresponding potential decrease in operating costs is $122.

There is a problem with pulling ahead sales, as mentioned above, which consists of the manufacturer's CAFE for subsequent years being reduced. For example, if a manufacturer increases its MY 1989 CAFE by pulling ahead sales of fuel-efficient cars from MY 1990, the MY 1990 CAFE will decrease, compared with the level it would have been in the absence of any pull-ahead sales attributable to marketing efforts. For this reason, a manufacturer cannot continually improve its CAFE simply by pulling ahead sales.

As indicated in the NPRM, Ford and GM have both provided specific information concerning their marketing programs. GM indicated that its total cost for numerous incentive programs for its fuel-efficient cars during MY 1987–88 was over $2.0 billion. Ford indicated that its expenditures for its marketing program approaches $3.0 billion for the years 1982–1988. Ford also stated that its marketing support costs are disproportionately greater for its fuel-efficient models than its large-luxury models.

NHTSA notes that the Department of Commerce (DOC) commented that due to severe competition, it expects U.S. producer sales in the small car segment will decline from an estimated 590,000 vehicles in 1988 to 445,000 in 1989 and 350,000 in 1990. That Department stated that this competition will limit the ability of full-line U.S. manufacturers to use price incentives to stimulate small car sales. DOC commented further that U.S. automobile manufacturers will also face growing foreign competition in the mid-size and large/luxury car markets during 1989 and 1990, and that in this intensely competitive market for larger as well as small cars, profit margins in all lines will be under intense competitive pressure. That Department concluded that it will thus become increasingly difficult for full-line manufacturers to use price discounting of their smaller cars to shift effective consumer demand in that direction.

For all of the reasons discussed above, and in light of the expected market conditions described by DOC, NHTSA does not believe that GM and Ford can significantly improve their CAFE levels by increased marketing efforts of domestic fuel-efficient models beyond what they have already been doing.

Any additional efforts by the manufacturers to increase their MY 1989 CAFE, therefore, would be limited largely to attempts to change product mixes through product restrictions.

In looking at the potential methods for improving CAFE, the agency also has recognized in the past that manufacturers could improve their CAFE by restricting their product offerings, e.g., deleting less fuel-efficient car lines or dropping higher performance engines. However, as discussed in previous rulemakings, such product restrictions undoubtedly will have significant adverse economic impacts on jobs, the industry and the economy as a whole—effects which would run counter to the statutory criterion of economic practicability and the Congressional intent that the CAFE program not unduly limit consumer choice.

VI–C. Manufacturer-Specific CAFE Capabilities

In analyzing manufacturer-specific CAFE capabilities, the agency has focused on the domestic fleets of GM and Ford, because they have the lowest individual projected MY 1989 CAFE levels among manufacturers with a substantial share of the market, and no combination of manufacturers with lower projected CAFE levels would constitute a substantial share of the market.

1. GM

NHTSA has analyzed GM's MY 1989 CAFE projection and underlying plan. As discussed above, GM indicated in its September 1988 comment that its current product plan is expected to result in a MY 1989 CAFE level of 27.2 mpg. If NHTSA focused narrowly on GM's MY 1989 CAFE projection and its MY 1988 CAFE achievement, it would presumably conclude that GM's MY 1989 capability is above that of Ford. While manufacturer product plans are subject to risks, GM's 27.2 mpg projection reflects that company's best estimate of its MY 1989 CAFE, in light of its current product plan.

As discussed above, however, NHTSA believes that too narrow a focus on GM's MY 1988 CAFE achievement and MY 1989 CAFE projection could have the effect of ratifying the significant loss in market share that company has experienced over the past several years and the significant job losses that accompanied that market loss. The agency believes that its analysis of GM's capability should also consider the CAFE level that company might achieve if it more aggressively seeks to regain, in MY 1989, a portion of its lost market share. As indicated above, GM's current product plan reflects the constraints of a 27.5 mpg standard, and the agency does not believe that it reflects the kinds of actions GM might wish to take to restore market share and jobs if there were a lower MY 1989 CAFE standard.

NHTSA recognizes that it is difficult to estimate what GM's CAFE capability would be under a scenario of seeking to regain lost market share and jobs. Ford's recent CAFE experience suggests that a full line manufacturer can achieve approximately 26.5 mpg, while remaining fully competitive in all market segments. The agency has analyzed GM's product plan and concluded that efforts by that company to restore its market share in less-fuel-efficient market segments could, consistent with its capacity restraints, result in a MY 1989 CAFE of 26.5 mpg or below. These efforts could include pricing and other actions to promote sales of compact, intermediate and luxury cars. In light of Ford's experience and NHTSA's

analysis of the kinds of actions GM might take to restore lost market share and jobs, the agency concludes that 26.5 mpg appropriately represents GM's MY 1989 CAFE capability.

NHTSA notes that the Department of Energy commented that it is its judgment that the 27.5 mpg standard is achievable by GM in MY 1989. This conclusion was largely based on the fact that GM achieved a CAFE of 27.6 mpg in MY 1988. Several other commenters also cited GM's MY 1988 achievement as evidence that GM can achieve 27.5 mpg in MY 1989. DOE suggested that some of the decreases in GM's MY 1989 CAFE were unexplained. However, NHTSA believes that GM's August 1988 and September 1988 submissions fully explain the expected decline in its MY 1989 CAFE, as compared to MY 1988. The agency believes that GM's MY 1989 CAFE projection of 27.2 mpg reasonably reflects that company's current product plan. While NHTSA does not agree that GM could necessarily achieve 27.5 mpg CAFE in MY 1989 without some product restrictions, it does agree with DOE and other commenters that, using GM's MY 1988 experience as a baseline, that company could achieve a CAFE above 26.5 mpg (and might well experience further losses in market share and jobs as well). However, as discussed above, NHTSA believes that the approach of narrowly focusing on GM's MY 1988 CAFE achievement and MY 1989 CAFE projection could have the effect of casting in concrete the significant loss in market share that company has experienced over the past several years, and the significant job losses which accompanied that market loss.

The Natural Resources Defense Council (NRDC) also cited GM's MY 1988 CAFE performance, and argued that GM's claim that its CAFE will drop should be viewed skeptically, especially since that company asserts that its lagging large cars sales are an aberration even though they reflect a nationwide trend toward smaller vehicles. That commenter argued that GM's loss in market share is not due to CAFE.

As discussed above, NHTSA acknowledges that the larger car segment of the market has been shrinking in absolute terms. Between MY 1984 and MY 1987, the share of sales taken by mid-size and larger cars declined from 42.7 percent of the market to 36.4 percent. During this time period, the smallest car segment also declined. The share captured by subcompact and smaller models fell from 29.4 percent in MY 1984 to 23.6 percent in MY 1987. The growth has been in the compact segment, as its share grew from 27.9 percent to 40.0 percent over the same time period.

However, NHTSA believes that in order for GM to be able to adequately compete in today's intensely competitive market, it must be able to accommodate consumer demand for such attributes as larger engines and larger interior space. These actions come at a CAFE price, however, since they generally reduce the fuel efficiency of a model. To the extent that GM is able to so accommodate consumer demand or otherwise increase the sales of its less fuel-efficient vehicles, including less fuel-efficient compacts as well as larger vehicles, its CAFE will decline, relative to what it achieved in MY 1988. This decline is in addition to that portion of the decline that reflects unexpectedly high EPA test results in MY 1988.

2. Ford

NHTSA has analyzed Ford's MY 1989 CAFE projection and underlying product plan. As indicated above, Ford stated in its September 1988 comment that it projects its 1989 model year CAFE level at about 26.5 mpg. Ford indicated further at the September 14, 1988 public hearing that while there is a set of assumptions with its product plan, it projects achieving the 26.5 mpg level for MY 1989 with some level of confidence.

In light of Ford's statements and the agency's analysis of Ford's product plan, NHTSA has concluded that 26.5 mpg represents Ford's MY 1989 CAFE capability, taking account of possible uncertainties. In reaching this conclusion, the agency notes that Ford achieved a similar level, 26.4 mpg, in model years 1987–88, and that it did so while generally increasing its market share of larger cars and remaining fully competitive in all market segments. Ford was able to hold its CAFE about steady while increasing its market share of large cars, but only by taking a number of offsetting fuel-efficiency enhancing actions.

VII. Manufacturer Compliance Efforts

While there is now insufficient leadtime for GM and Ford to initiate further significant technological improvements to achieve CAFE of 27.5 mpg in MY 1989, the standards have been in existence since 1975. Thus, as part of deciding whether to exercise its discretion to reduce the standards to the maximum feasible average fuel economy level, NHTSA has evaluated whether the manufacturers made sufficient efforts through September 1988 to meet the standard.

As discussed in the MY 1986 and MY 1987–88 proceedings and noted above, the agency does not consider it appropriate to judge each and every manufacturer product action by 20–20 hindsight. Rather, in assessing the sufficiency of the manufacturers' fuel economy efforts, it is necessary to take account of the information available at the time product decisions were being made.

For MY 1986, and again for MY 1987–88, the agency determined that GM and Ford had plans adequate to meet the 27.5 mpg standard, but that these plans were overtaken by unforeseen events in the early 1980's. The agency identified a number of factors which led to lower than expected CAFE levels, including the declining price of gasoline and a related increase in expected consumer demand for larger and more powerful cars. The agency concluded that the manufacturers did not have time to offset the impact of these unexpected events by developing and implementing supplementary or alternate plans for meeting the CAFE standard of 27.5 mpg for MY 1986–88.

NHTSA observed in the NPRM for this proceeding that given the passage of time since those unforeseen events in the early 1980's, coupled with the agency's understanding of traditional auto industry leadtimes to introduce new technologies or new vehicles, the agency could not reasonably base an exercise of its discretion to amend the MY 1989 standard on the same set of facts that supported the reduction of the MY 1986–88 standards. NHTSA explained that it would need to know whether, and to what extent, the industry as a whole made new reasonable plans to comply with the 27.5 mpg standard after the unanticipated events of the early 1980's overtook the previous plans.

As part of evaluating whether GM and Ford made sufficient efforts to achieve a 27.5 mpg CAFE for MY 1989, the agency has evaluated the manufacturer's MY 1989 CAFE projections and product plans submitted to the agency over time.

GM projected in February 1985 that it could achieve a CAFE of 30.1 mpg for MY 1989. Between February 1985 and August 1985, GM lowered its projection by 1.5 mpg. to 28.6 mpg.

Ford projected in February 1985 that it could achieve a CAFE of 28.3 mpg for MY 1989. Between February 1985 and August 1985, Ford lowered its projection by 1.5 mpg, to 26.8 mpg. In October 1985, however, Ford projected that it could achieve 27.6 mpg.

In this proceeding, both GM and Ford cited substantial unforeseen changes in

market conditions which occurred *after* the early 1980's, including a precipitous unexpected drop in gasoline prices during 1986, as the primary cause for their MY 1989 CAFE projections falling below 27.5 mpg after 1985. Between 1981 and 1985, real gasoline prices dropped a total of 25 percent, from $1.63 per gallon to $1.22 (1986 dollars). During 1986, however, gasoline prices unexpectedly dropped *another* 24 percent, to $0.93 (1986 dollars), and have remained at a low level.

Ford indicated that it recognized by early 1986 that its earlier product plan to achieve 27.5 mpg for MY 1989 had been overtaken by events. GM indicated that it recognized by mid-1986 that its earlier product plan to achieve 27.5 mpg for MY 1989 had been overtaken by events.

NHTSA believes that the events described by the manufacturers raise three basic issues: (1) Whether GM and Ford had reasonable plans to achieve 27.5 mpg CAFE for MY 1989 *prior* to 1986, (2) whether the fall in gasoline prices and other events cited by the manufacturers were of a nature that overtook the manufacturers' previous product plans, and (3) whether the manufacturers made sufficient efforts, under the statute, to achieve 27.5 mpg after early to mid-1986. Each of these issues is addressed below.

The first of the three issues is whether GM and Ford had reasonable plans to achieve 27.5 mpg CAFE for MY 1989 prior to 1986, i.e., before the occurrence of the events which the manufacturers assert overtook their plans. Based on its review of GM's August 1985 product plan for MY 1989, the agency believes that GM's plan was reasonably calculated, as of that time, to meet the 27.5 mpg standard. NHTSA notes that GM expected to exceed the 27.5 mpg by more than 1.0 mpg, an amount which, among other things, may be viewed as representing a margin of safety for meeting the standard.

The agency does not have as detailed information regarding Ford's 1985 product plans for MY 1989. Among other things, it does not have detailed information concerning why Ford revised its estimates downward in August 1985 and back upward in October 1985. As always, however, the agency would not be judging any such plan with 20/20 hindsight. Instead, the agency would consider whether the product decisions were reasonable when they were made.

Examination of the reasonableness of manufacturer plans in this proceeding includes consideration of whether the fall in gasoline prices and other events cited by the manufacturers were in fact unexpected, in light of the manufacturers' reliance on this argument to explain the change in their projections. NHTSA believes that a *second* drop in gasoline prices of this magnitude was unexpected at the time manufacturers were first developing their MY 1989 product plans. For example, during the fall of 1983, the Energy Information Administration (EIA) was forecasting essentially constant gasoline prices between 1985 and 1986, $1.22 per gallon in 1985 and $1.20 in 1986 (1985 dollars). Similarly, during the winter of 1983–84, Data Resources, Inc. (DRI) was forecasting essentially constant gasoline prices between 1985 and 1986, $1.30 per gallon in 1985 and $1.31 in 1986 (1985 dollars). While EIA and DRI both expected by the summer of 1985 that gasoline prices would decline between 1985 and 1986, even at that late date they did not anticipate the magnitude of the decline. EIA forecast in July 1985 that gasoline prices would decline from $1.19 per gallon in 1985 to $1.11 in 1986 (1985 dollars). DRI forecast in the summer of 1985 that gasoline prices would decline from $1.20 in 1985 to $1.14 in 1986 (1985 dollars). By comparison, the actual decline in gasoline prices between 1985 and 1986 was from $1.20 per gallon to $0.91 (1985 dollars).

NHTSA also believes it is clear that the magnitude of the changes in the competitive market facing GM was also unexpected. The agency notes that GM's July 1986 product plan for MY 1988 forecast total GM production of nearly 4.6 million cars, while that company now expects to produce fewer than 3.5 million cars. This change in expected volume reflects GM's loss in market share since 1985.

As to Ford, NHTSA believes that company has made significant attempts over time to improve its CAFE. Ford commented that for MY 1987 through 1989, it will have spent $3 billion on programs that will improve fuel economy. According to that company, this figure exceeds the level submitted to the agency in 1985 by more than $500 million and includes more than 60 product improvement actions that have had a beneficial effect on fuel economy. Ford also indicated that from 1986 to 1988, it will have spent nearly $2 billion on marketing actions alone to improve sales of its fuel efficient car lines. The agency notes that Ford's significant attempts to improve CAFE have enabled it to hold its CAFE level essentially constant in recent model years despite experiencing significant mix shifts toward larger, higher performance cars that are less fuel efficient.

The second of the three issues is whether the fall in gasoline prices and other events cited by the manufacturers were of a nature that overtook the manufacturers' previous product plans. NHTSA agrees that the precipitous fall in gasoline prices during 1986 did result in a substantial shift in consumer demand toward less-fuel efficient vehicles, overtaking GM's and Ford's earlier MY 1989 product plans. As gasoline prices decrease, the costs of operating cars that are larger or have more performance decrease. Therefore, all other things being equal, consumer demand for larger cars and higher performance increases. The Department of Commerce noted that the latest (1987) J.D. Power survey of consumer purchasing attitudes indicated that performance ranks above fuel economy by twelve percentage points. Moreover, both Ford and GM provided data showing an increase in customer satisfaction as performance increases.

GM and Ford also cited other unexpected events which contributed to the decline in their MY 1989 CAFE levels. GM indicated that competitive pressures, affecting both its product and engine lineups as well as capital spending programs also impacted its plan. That company stated that anticipated further increases in consumer demand for improved powertrains led to product changes. GM stated that in substantial part due to the investment needed to accomplish these necessary changes, other previously planned new vehicles and engine programs had to be deferred or cancelled.

NHTSA notes that the Department of Commerce commented that the domestic manufacturers face an intensely competitive market for larger as well as smaller cars and that Japanese manufacturers will be making a strong push into the compact, intermediate and luxury segments during the next five years. A July 4, 1988, *Automotive News* article, cited by GM, indicates that Japanese automakers are preparing a massive onslaught of new products for the U.S. market over the next four years, especially in performance-luxury and other segments traditionally dominated by the domestics.

NHTSA agrees that the competitive pressures facing GM have contributed to the decline in its expected MY 1989 CAFE. In order to be competitive, GM has needed to make some changes in its product plan to increase performance, with some negative impact on CAFE. Also, given those pressures, that company has needed to focus its limited capital resources on meeting the competition.

Ford stated that interest rates have had a negative impact on its MY 1989 CAFE level. That company stated that in 1985 it was forecasted that interest rates would be 11.8 percent in both 1988 and 1989. However, interest rates are now predicted to be 9.4 percent in 1988. Ford stated that lower finance costs shift some additional sales to larger cars.

The last of the three issues is whether the manufacturers made sufficient efforts, under the statute, to achieve 27.5 mpg after early to mid-1986, the times GM and Ford indicated that they recognized their earlier plans had been overtaken by events.

NHTSA believes it is clear that GM made sufficient efforts after mid-1986, the time it recognized its MY 1989 CAFE would be below 27.5 mpg, to meet that standard.

First, GM reexamined its product plans in an effort to identify fuel economy improvements, beyond those already planned, that might be implemented within the available leadtime. GM then made the changes it found feasible. For example, in the fall of 1986, GM made a product plan change to reduce aerodynamic drag of certain cars. In the spring of 1987 and fall of 1988, GM revised certain product plans to obtain lower rolling resistance for tires. Following its July 1986 forecast, GM implemented another technological change to improve fuel economy, but the projected benefit was not obtained. GM also made a number of product plan changes related to engine utilization and powertrains, although one of the changes needed to be rescinded in response to negative press and customer reaction regarding performance.

Second, GM planned a number of market forcing actions to improve CAFE, including plans to increase smaller car sales via incentives and to increase the penetration of 4-cylinder engines and 4-speed automatic transmissions in certain cars. GM implemented its plan until May 1988, the time it submitted its petition for rulemaking, when the combined effects of a number of developments led to further necessary adjustments to its plan.

NHTSA concludes that GM had a plan to meet the 27.5 mpg standard for MY 1988, but that plan was overtaken by events beyond GM's control that occurred during the time period beginning in late 1985 through mid-1986. Among other things, a substantial shift in consumer demand occurred toward cars with better performance. The agency also concludes that after GM recognized in mid-1986 that its plan had been overtaken by events, that company took appropriate compensating actions in a continuing effort to meet the 27.5 mpg standard.

With respect to whether Ford made reasonable efforts to achieve 27.5 mpg CAFE after early 1986, the time it recognized its MY 1989 CAFE would be below that level, NHTSA notes that the availability of credits makes it difficult to analyze the sufficiency of that manufacturer's efforts. The agency notes that Ford expected during much of the period from 1986 to 1988 to have substantial credits that could be carried forward to MY 1989. (GM's credit situation was much more uncertain during this period.) While the statutory 27.5 mpg CAFE standard for future model years creates a continuing duty for manufacturers to achieve 27.5 mpg CAFE in the long run, the statute also permits manufacturers to use credits to comply with the standard for a particular model year. We note that the obligation under the statute for a particular model year is *compliance*, rather than producing a fleet in that year which achieves the level of the standard for that year and, thus, the existence of credits may influence manufacturer decision about CAFE compliance.

To the extent that Ford expected through most of the 1986 to 1988 time period to be able to meet the MY 1989 standard by using credits, that company in fact had no legal *duty* to make additional efforts to achieve 27.5 mpg. Since the concept of "reasonable" or "sufficient" efforts ultimately owes its existence to a legal duty, the concept has little meaning where a manufacturer does not have a duty, due to credits.

NHTSA observed in the NPRM that Ford, in an earlier submission, indicated that its compliance with the statute would be achieved by using credits earned by exceeding the standard in other years. The agency noted that *if* that company decided not to make product-related efforts to achieve 27.5 mpg in MY 1989–90 in light of credits from other years, such a decision would be acceptable under the statute. The agency also observed, however, that if a manufacturer chooses, in light of the flexibility offered by the credit provisions, not to make the efforts necessary to achieve the level of a standard for a particular model year, it would be inconsistent with the statutory scheme for the agency then to exercise its discretion to lower the standard solely on the basis of that manufacturer's inability to meet the standard.

NHTSA is not exercising its discretion to lower the standard solely on the basis of Ford's capability. Therefore, there is no need to resolve the issue of how to analyze the "reasonableness" of a manufacturer's efforts to achieve 27.5 mpg in light of the availability of credits. NHTSA notes again, however, that Ford has made significant progress in trying to improve its CAFE, especially in the last few years.

VIII. The Effect of Fuel Economy Standards on Safety

One of the petitions filed in this proceeding was from the Competitive Enterprise Institute, asking the agency to reduce the CAFE standards for model years 1989 and 1990 to 24.0 mpg, the fuel economy level CEI asserts would be achieved if there had never been any fuel economy standards and would be none in future years. The basis for this request is CEI's further contention that CAFE standards that exceed 24.0 mpg would have adverse safety consequences.

After the agency's proposal was published for comment, CEI and several other commenters again asked the agency to conclude that CAFE standards result in vehicle downsizing, and that downsizing, in turn, degrades safety. CEI and the other commenters advocate a CAFE standard around 24.0 mpg, which they believe would be the CAFE level of the fleet in the absence of CAFE standards.

CEI's argument is based on finding a direct relationship between vehicle weight and vehicle safety and saying that the CAFE program has caused manufacturers to reduce vehicle size. CEI claims that a standard set at 26.5 mpg will cause 1,500–2,800 excess fatalities in the MY 1989 fleet as compared to the fatalities that would have occurred in the absence of the CAFE standards.

CEI relies on the premise that heavier cars are generally safer for vehicle occupants than smaller cars, other things being equal. CEI then notes that downsizing (reducing vehicle weight and exterior dimensions) has been extensively used by the manufacturers as a means of improving CAFE. CEI states that these reductions in car size and weight have resulted in less protection for occupants of these cars. CEI concludes that the CAFE standards are responsible for current car sizes and weights and thus, the CAFE standards are also responsible for a reduction in the level of safety otherwise available to the vehicle occupants. CEI further concludes that if there were no CAFE standards, or if the standard were set so low as to be the substantial equivalent of no standard, the size and weight of current cars would be significantly greater.

In support for these assertions, CEI attached a copy of a paper entitled "The Effect of Fuel Economy Standards on Automobile Safety" by Robert W. Crandall and John D. Graham (1988). For convenience, this paper is referred to as "Crandall/Graham" throughout the remainder of this discussion. Crandall/Graham estimated that a 27.5 mpg standard for the 1989 model year would result in 2,200 to 3,900 additional occupant fatalities and 11,000 to 19,500 additional serious injuries to occupants, as compared to expected fatalities and serious injuries absent any CAFE standard.

CEI concluded its argument with the following statement of its position:

> Neither Congress nor this agency has made any express determination that energy conservation under CAFE should require the loss of human life. It is CEI's position that, absent such a determination, a CAFE standard which *does* result in the loss of life is impracticable and is beyond the "need of the Nation to conserve energy" under [15 U.S.C.] subsection 2002(e). In short, such a standard has no statutory authorization. (Emphasis in original).

Other commenters and participants at the public meeting also addressed the question of whether there would be safety impacts associated with the 1989 model year CAFE standards. Most of the other commenters that addressed the safety issue associated themselves with the Crandall/Graham theory. These commenters included Consumer Alert, the Heritage Foundation, and the Council of Economic Advisors.

Making a similar point, but based on different information, was the Insurance Institute for Highway Safety (IIHS). IIHS claimed that car size (defined as wheelbase length), as opposed to weight, is an important factor in the protection afforded to vehicle occupants, because large cars, due to their larger crush space, offer greater occupant protection than small cars. IIHS asked the agency to carefully evaluate the effects of the CAFE standard for the 1989 model year, to ensure that the CAFE standard will not degrade the level of occupant protection offered in 1989 cars by forcing manufacturers to decrease the size of those cars. The IIHS testimony at the public hearing stated:

> * * * there is a point beyond which weight cannot be reduced without making vehicles smaller and thereby compromising safety. Furthermore, it seems probable that much of the potential weight reduction possible from the use of lighter weight materials has already been accomplished. Therefore, NHTSA must carefully evaluate the regulatory effects of the fuel economy standards to ensure that they do not degrade safety by forcing decreases in car size. At this time, it seems certain that any toughening of the CAFE requirements would lead to smaller and therefore less safe cars.

Conversely, IIHS suggested that safety could be affected negatively by a lower CAFE standard for 1989, if a lower standard results in larger numbers of larger displacement, high performance engines. IIHS suggested that larger engines would lead to greater performance, and that increases in performance increase the chances of a car being in a crash and the chances of the occupants being killed or injured. The National Safety Council filed comments making points similar to those raised by IIHS.

The Center for Auto Safety (CFAS), on the other hand, stated at the public meeting that there is no evidence that CAFE standards have a negative impact on the safety of vehicle occupants. CFAS stated that, in 1975, when the average fuel economy of the new car fleet was about 14 mpg, there were 3.6 fatalities per 100 million vehicle miles traveled. In 1988, when the average fuel economy of the new car fleet was about 28.4 mpg, fatalities per 100 million vehicle miles traveled had decreased to 2.4. According to CFAS, these statistics suggest that manufacturers can improve both safety and fuel economy at the same time.

CEI's comments on the NPRM for the 1989 model year CAFE standard made two additional points about the safety implications of CAFE standards. First, CEI alleged that smaller cars are less compatible with roadside objects, such as guardrails and break-away light poles, that were designed for a heavier vehicle population. CEI suggested that this poses additional hazards to occupants of smaller cars. Second, CEI stated that it knew of no evidence to suggest that cars with higher performance, because of larger engines, negatively affect the safety of occupants. Moreover, CEI argued that even if high performance cars present a real safety hazard in their own right, such cars would have little impact on overall safety because of their small market share.

In its comments on the NPRM, CFAS stated that it disagreed with CEI's basic thesis that CAFE standards have a negative impact on safety by forcing manufacturer to sell less safe, smaller cars. According to CFAS, fuel-efficient large cars can be and have been built, while small cars with very effective occupant protection can be and have been built. Further, CFAS suggested that any reduction of the CAFE standard for the 1989 model year would result only in higher performance and bigger engines in existing car designs, which would negatively affect occupant safety, instead of resulting in larger vehicles.

NHTSA notes that it has previously considered and rejected a similar contention by CEI with respect to the safety consequences of the CAFE standards for the 1987–1988 model year CAFE standards. *See* 51 FR 35612–35613. While the new CEI arguments are very similar to the arguments they made in the previous proceeding, CEI now relies on the Crandall/Graham analysis discussed above.

The Crandall/Graham study relies on the assumption that the CAFE program has forced the downsizing of the fleet and is responsible for the fact that the current fleet of new cars is lighter than it would have been in the absence of CAFE. The agency agrees that cars in the new car fleet are, on average, about 1000 pounds lighter now than they were in 1975. But, as the agency has noted several times in the past, this downsizing occurred primarily as a result of consumer demand for more fuel efficient models, rather than a result of the CAFE standards. See, e.g., the preamble to the final rule for MY 1987–1988, 51 FR 35613. And, most downsizing occurred in the 1970's, when manufacturers were easily exceeding the applicable CAFE standards. The agency also observes that the weight of the new car fleet has not changed appreciably since the early 1980's, although the average fuel economy of the fleet has improved each year. Thus, the agency does not agree that the CAFE program is the primary reason for the fact that the average new car is lighter than it was a decade ago.

On the other hand, NHTSA has noted in the past the possibility that higher CAFE standards could have an adverse effect on safety. For example, the the preamble to the final rule for MY 1987–1988, the agency stated,

> Moreover, it is possible CAFE standards above 27.5 mpg could have a significant effect on safety, even in the longer run, to the extent that they might "force" consumers into significantly smaller and lighter cars. Thus, were NHTSA to consider setting standards above 27.5 mpg in the future, it agrees that the issue of safety would warrant further attention.
>
> 51 FR 35613 (October 6, 1986).

Thus, while we do not agree with Crandall/Graham about the historic influence of the CAFE program on downsizing, we do agree with the assertion that in crashes involving vehicles of different sizes, with everything else being equal, the occupants of the smaller vehicle are at greater risk of serious injury than the occupant of the larger vehicle in multi-

vehicle crashes. The agency also agrees that significant amounts of further downsizing could raise safety implications that should be considered if the agency were to consider higher CAFE standards in the future.

With regard to this proceeding, however, NHTSA concludes, for the reasons discussed below, that there is no evidence demonstrating adverse safety consequences that would be associated with a CAFE standard for the 1989 model year in the range of 26.5 mpg to 27.5 mpg.

First, it is clear that there is not a direct, linear relationship between a manufacturer's CAFE and the average weight of his fleet. For example, in Model Year 1988, the average weight of the GM fleet was 3329 pounds, at a CAFE of 27.6 mpg, while the Ford fleet weighed an average of 3,248 pounds, with a CAFE of 26.5 mpg. This example illustrates the point that not all CAFE gains come at a price of reducing weight. Further, the new car fleet as a whole can illustrate the same point. The overall new car fleet (all domestics and imports combined) had an average fuel economy of 28.2 mpg in MY 1987; yet, the average weight of a new car in MY 1987 was 3100 pounds, a two pound *increase* in weight over the average weight of a 1982 new car, when the overall fleet average fuel economy was 26.6 mpg. Thus, it is clear that there are methods of improving fuel economy that do not depend on downsizing or weight reduction.

Second, based on the record of this proceeding, NHTSA concludes that the large manufacturers are unlikely to take any actions to add weight to the models already planned for sale during MY 1989. While the agency does anticipate mix shifts as a result of this proceeding, these shifts should occur as a result of the larger manufacturers capturing sales of comparably sized vehicles that would otherwise have been made by other manufacturers. Also, the standard set at 26.5 mpg should permit manufacturers to retain passenger car customers that might otherwise have purchased a light truck or van. This conclusion is consistent with the agency's overall conclusion that this decision will have a negligible effect on energy consumption, because consumers will be shifting their purchases from one car manufacturer to another or from the light truck (minivan) fleet back to the passenger car fleet. So, if the market shifts result in a heavier fleet for the company that gains the sales in the larger/luxury car segment, those shifts would also result in a lighter fleet for the company that loses the sales. The overall net effect on the average vehicle weight for the new car fleet for MY 1989 should be negligible.

This conclusion is supported in the record by the testimony of the large car manufacturers, both of which testified at the hearing that they would not make design changes (such as adding or deleting weight) to their MY 1989 models as a result of this rulemaking. The manufacturers also strongly agree with the agency's conclusions about mix shifting, because they have experienced such shifts. They believe that consumers who intend to purchase a larger vehicle will do so; they will not be "forced" into a smaller vehicle than wanted. If GM and Ford cannot produce such a vehicle, due to CAFE, then the consumer will buy a large car from another manufacturer, or will buy a minivan, or will keep his older, large car. One of those outcomes is more likely than the possibility that the consumer will buy a smaller car than he wanted to buy.

While the agency generally agrees with the principle that, in multi-vehicle crashes, heavier cars are safer than lighter cars, other things being equal, we also believe that any implications of that principle for the CAFE program are appropriately considered in the longer term, not the short, one-year time frame of this rulemaking proceeding. This agency would closely examine the safety consequences of any regulatory proposal to raise the CAFE standard if the effect of a standard set too high were to force drastic mix shifts for the fleet *as a whole* toward very small cars. If the agency concluded that such a shift would be adverse to safety, it would not set the standard at that level.

In response to the CEI comment that neither this agency nor Congress have considered the potential safety consequences of the CAFE standards, the agency notes that it has considered the safety impacts of CAFE standards in its rulemaking actions since the beginning of the CAFE program. The agency's first final rule on CAFE established passenger car standards for the 1981–1984 model years included a discussion of the safety impact of the standards. *See* 42 FR 33534, at 33551, June 30, 1977. The relationship between safety and fuel economy standards was also discussed in the final rule amending the passenger car fuel economy standards for the 1986 model year (50 FR 40547–40548, October 4, 1985), and in the final rule amending the 1987–88 passenger car fuel economy standards (51 FR 35612–35613, October 6, 1986). Hence, the agency does not agree with the contention that it has not considered the safety issue in issuing CAFE standards. As to Congressional consideration of the safety consequences of CAFE, the agency points to the 1974 report to Congress from the Department of Transportation and the Environmental Protection Agency entitled "Potential for Motor Vehicle Fuel Economy Improvements: Report to the Congress", October 24, 1974. This report, which was considered by Congress during the decision to enact the CAFE program, contained a discussion of the possible trade-offs in the areas of improved fuel economy, lower emissions, and increased occupant safety. The report summary noted that a sustained or increased shift to small cars, without a concurrent upgrading of their occupant protection capability, would likely lead to an increase in the rate of highway deaths and serious injuries. Thus, the agency cannot agree that Congress was unaware of the potential safety consequences of a downsized fleet of cars.

In response to the CFAS comment that there are a number of improved safety technologies that could offer better crash protection to occupants of some small cars than is afforded in some larger cars currently on the road, the agency does not disagree. However, if those same technologies were installed on the larger cars, as well, then the occupants of the larger car would be safer than the occupants of the equally equipped smaller car in a multi-vehicle crash.

In sum, the agency agrees with the commenters that NHTSA should consider whether there would be adverse effects on safety of a CAFE standard that forced manufacturers to do substantial additional downsizing of the passenger car fleet. Consistent with its past regulatory practices, the agency would carefully evaluate whether there were any such adverse effects in future CAFE rulemakings, and would not tolerate any CAFE standard that presented significant threats to safety.

IX. The Effect of Other Federal Standards on Fuel Economy

In determining the maximum feasible fuel economy level, the agency must take into consideration the potential effects of other Federal standards. The following section discusses: (a) Other government regulations, both in process and recently completed, that may have an impact on fuel economy capability; and (b) comments received on this issue. As to the latter, the agency notes that this general area generated relatively few comments as compared to other areas addressed by the NPRM. Mercedes commented generally that the

CAFE law can have a significant adverse effect on innovation in vehicle design, including safety aspects. While this commenter said airbags and antilock braking systems "add to vehicle weight and handicap achievement of the required CAFE," Mercedes did not provide specific information in its discussion that would enable the agency to ascertain exactly what those negative effects would be. Ford and GM commented briefly on certain issues in this area.

IX–A. NHTSA Standards

As discussed in the both the FRIA and NPRM, several relatively recent changes in Federal safety and damageability requirements could have an effect on CAFE. These include an amendment to the agency's lighting standard, which permits greater aerodynamic efficiency and implementation of automatic restraint requirements.

1. Lighting

With respect to the amendments to Federal Motor Vehicle Safety Standard 108, *Lamps, Reflective Devices, and Associated Equipment,* to permit the use of replaceable light source headlamps, smaller sealed beam headlamps, and lower headlamp mounting height, the FRIA concludes that the 2 to 3 percent improvement in aerodynamic drag associated with the new headlamp assemblies could produce a 0.4 to 0.9 percent improvement in fuel economy. For a 27.5 mpg fleet, this would equate to a 0.11 mpg to 0.25 mpg improvement in CAFE if all vehicles in that fleet employed the new lamp designs. Both Ford and GM are making extensive use of this new flexibility, and NHTSA estimates that there could be some slight gain (probably less than 0.1 mpg on a fleet average basis) in fuel economy from previous projections.

Related to this issue is the NPRM's reference to an assertion made by GM in its August 1988 docket submission that composite headlamps have been partially responsible for its "C" and "H" carlines moving into a higher EPA test weight category, producing a negative CAFE effect. NHTSA notes that in its September 14, 1988 testimony and in its September 15, 1988 docket submission, GM stated that the aerodynamic improvements made possible by the use of composite headlamps would produce a CAFE benefit in most cases. GM's latter statements accord with the agency's belief (that was formulated based on data supplied in 1983 by Ford relating to the amendment of Standard No. 108) that the new headlamps would produce a CAFE benefit.

2. Automatic Occupant Crash Protection

A July 1984 amendment to Federal Motor Vehicle Safety Standard 208, *Occupant Crash Protection,* specified the phase-in of automatic protection requirements beginning in model year 1987, with 40 percent phased in by MY 1989 and 100 percent implementation by MY 1990. The agency has developed its own estimate of the average incremental weight of automatic restraint systems. As noted in the FRIA, the agency's current best estimates of typical system incremental primary weights over manual belts are as follows: Front seat airbag, approximately 21 pounds; non-motorized automatic belts, approximately 11 pounds; and motorized automatic belts, approximately 15 pounds. Neither GM or Ford claimed during the Standard No. 208 rulemaking a specific weight penalty associated with these 208 requirements. Both stated, however, that there would be weight increases, and depending on the success or failure of weight-reducing efforts, as well as some weight-increasing pressures (options packages), that it is not unlikely that certain vehicles equipped with automatic restraints could result in the vehicle being placed in the next higher EPA test weight class. This would have a negative effect on EPA fuel economy rating for these vehicles and thus on the manufacturer's CAFE levels as well.

In its comment on the present rulemaking, Ford said that passive restraints on its 1987 Escort and 1988 Tempo/Topaz added significant weight (approximately 26–27 pounds). However, Ford did not provide any basis for this estimation that could help explain the marked difference between the agency's estimate of the average weight of a motorized automatic belt system and Ford's estimated weight of its system. Accordingly, since the agency's 15 pound figure is an average based on teardown studies of various motorized belt systems, NHTSA believes it is the best estimate of a typical system and an appropriate measure to use when calculating the average effect of the passive restraint requirement on the weight of the 1989 MY fleet.

Ford did not provide the agency with specific information on the type and quantity of the passive restraints it will use to certify its vehicles to Standard No. 208 in MY 1989. However, since only 40 percent of the 1989 MY fleet need meet the automatic restraint requirements and because information available to the agency indicates that the principal means of compliance with those requirements will be through automatic belts, the FRIA estimates the fleet average weight effect of Standard No. 208 for the 1989 MY fleet would be approximately 6 pounds (.4 x 15 pounds). That weight penalty is expected to have only a very minor impact on CAFE. For those vehicles equipped with air bags, the penalty will be somewhat higher.

3. Rear Seat Lap/Shoulder Belts

On June 16, 1987, the agency published an advance notice of proposed rulemaking (52 FR 22818) requesting comments on the possible requirement to install lap/shoulder belts in rear seating positions of passenger cars, multipurpose vehicles and small buses. In its Preliminary Regulatory Analysis for the ANPRM, the agency estimated that each single outboard seating position would incur a marginal weight increase of 0.6 pounds for attaching hardware and belt webbing. The marginal weight increase for each center seating position was estimated to be 2.4 pounds since a reinforcement plate and retractor and housing would also be required. However, for models that are near the limit of an EPA test weight class, even this relatively small change could move some vehicles into a higher weight class, decreasing its measured fuel economy. The agency notes that GM expects all of its carlines to have such restraints installed in MY 1989.

4. Side Impact Protection

On January 27, 1988, the agency published a proposed rule (53 FR 2239) to upgrade its test procedures and performance requirements for side impact protection for passenger cars. The agency is focusing on two ways of improving the side impact performance of passenger cars: adding padding on the door and increased structure to reduce intrusion. Specific weight penalties are not known yet, and will depend on such factors as final performance requirements, chosen countermeasure, and baseline vehicle performance. The agency has not considered any negative effect of this proposed standard on CAFE performance, since any final rule on this subject would not apply to the MY 1989 under consideration in this rulemaking.

5. New Car Assessment Program

Title II of the Cost Savings Act requires NHTSA to develop and disseminate comparative information on the crashworthiness, damage susceptibility and ease of diagnosis and repair of motor vehicles. The agency's experimental New Car Assessment

Program (NCAP) addresses the crashworthiness aspect of Title II by providing comparative frontal crashworthiness safety performance information, in the form of dummy injury measurements, on selected vehicles which are crashed head-on into a fixed barrier at 35 mph. Due to the very nature of NCAP that encourages consumers to compare products, and because the vehicles tested in NCAP are subjected to a crash that is approximately 36 percent more severe than the 30 mph crash required by Standard No. 208, the agency believes that the program induces many manufacturers to make voluntary improvements in front end design and occupant compartment protection features. One such feature is the air bags, which has a weight penalty.

6. Voluntarily Installed Safety Features

The agency notes that manufacturers are also increasing the weight of their vehicles, at the cost of losing CAFE, by voluntarily installing safety features in their cars. The use of airbags in place of automatic safety belts and the production of rear seat shoulder belts and anti-lock brakes are items of safety equipment that improve occupant safety while adding weight to the vehicle. GM, for example, is the leader in installing rear seat shoulder belts (all of its MY 1989 cars will have them as standard equipment) and offering anti-lock brakes (offered on 8 carlines in MY 1988). In addition, other safety devices could be added to vehicles were it not for CAFE constraints. For example, GM told the agency it could not offer daytime running lamps on its cars because their CAFE would decline by almost 0.3 mpg as a result. The agency is concerned that overly stringent CAFE standards might discourage manufacturers from these and other voluntary safety actions.

IX–B. EPA standards

1. Noise Standards

The agency is not aware of any plans on the part of the Environmental Protection Agency to promulgate noise regulations during the time period under discussion. Accordingly, no fuel economy penalties from noise regulations have been forecast.

2. Emissions Standards

EPA has not announced any plans to modify its current exhaust emission control requirements for hydrocarbons, carbon monoxide and oxides of nitrogen. Therefore, the agency has not considered any further impacts on fuel economy from control of these pollutants. As discussed in the FRIA, the agency has analyzed previously the effects of the current requirements on fuel economy.

Also discussed in the FRIA is EPA's tightening control of particulate matter that became effective in MY 1987. While this requirement applies to all vehicles, the only current production powerplant which will have difficulty meeting this requirement is the diesel engine. EPA has indicated that there is a 1 to 2 percent fuel economy penalty for diesel powered vehicles that require a particulate trap to comply with the standard; however, the agency believes that only a very small fraction of the diesel vehicles (those with larger displacement engines) will need traps for compliance. GM and Ford have both discontinued all domestically produced diesels. Thus, the more stringent particulate standard will not have an impact on the CAFE capability of these two manufacturers.

In July 1987, EPA issued a proposed rule on the on-board control of refueling emissions. The proposal would limit gasoline vapor emissions to 0.10 grams of vapor per gallon of dispensed fuel. The agency has not taken this future rulemaking into its estimates of CAFE levels for two reasons. First, it is still only a proposal. NHTSA and others have expressed safety concerns, which must be resolved before a final decision is made on whether to require such systems. Second, the final rule, if and when issued, would not take effect until at least two model years after that point, which is beyond the model years that are the subject of this rulemaking.

The California Air Resources Board (CARB) has adopted a new requirement that will require 50 percent of all MY 1989 light duty passenger cars and 90 percent of MY 1990 passenger cars to meet a 0.4 gm/mi NOx standard. GM has indicated that this requirement will result in a 4 to 5 percent negative impact on the fuel economy of approximately 300,000 of its vehicles. Ford has not claimed specific CAFE losses due to the California NOx requirements. Half of all vehicles certified to the Federal NOx standard are already below the California standard of 0.4 gm/mi level. While they may not be far enough below to ensure compliance, CARB believes that its standard can be met with little or no degradation in fuel economy using refined emission control technology calibrations and higher catalyst loadings. NHTSA has accepted GM's assertion of a CAFE reduction in this area for MY 1989, since more stringent emission standards generally have a more pronounced impact during the first few years following their implementation. The agency notes, however, that data from CARB and EPA indicate that it is unlikely this penalty will last past a several year period during which manufacturers will be gaining experience certifying at the new CARB level.

3. Fuel Economy Test Procedure

The Environmental Protection Agency published a final rule on July 1, 1985, providing CAFE adjustments to compensate for the effects of past test procedure changes (See 50 FR 27172). The final rule adopted a formula approach for calculating CAFE adjustments. The manufacturer projections discussed above include the effect of the EPA test adjustment credit. Due to the formula approach, the specific value of the credit may vary for different model years and among manufacturers. A typical credit for the model years in questions would be 0.2–0.3 mpg.

X. Need of the Nation to Conserve Energy

Since 1975, when the Energy Policy and Conservation Act was passed, this nation's energy situation has changed significantly. Oil markets were deregulated in 1981, permitting consumers to make choices in response to market signals and allowing the market to adjust quickly to changing conditions. The U.S. Strategic Petroleum Reserve (SPR) was built to ensure a supply of oil during any major supply disruption. In July 1988, the SPR contained 551 million barrels of oil, stored principally in underground caverns, that could be pumped back to the surface if needed.

The United States imported 15 percent of its oil needs in 1955. The import share had reached 36.8 percent by 1975, and peaked at 46.4 percent in 1977, at a cost of $71 billion (stated in 1986 dollars). While the import share of total petroleum supply declined after that year, the cost continued to rise to a 1980 peak level of $99 billion (1986 dollars). By 1985, the import share had declined to 28.7 percent at a cost of $52 billion (1986 dollars). In addition, imports from OPEC sources declined through 1985, from a high of 6.2 million barrels per day (MMB/D) and 70.3 percent of all imports in 1977 to 1.8 MMB/D barrels per day and 36.2 percent of imports in 1985.

Since 1985, the import share of petroleum supply has been increasing. Between 1985 and 1986, net imports rose from 28.7 percent of the U.S. petroleum supply to 34.6 percent. In 1987 that figure was 37.1 percent, and for the first six months of 1988, net imports accounted for 38.1 percent of total supply. Due to

sharply lower petroleum prices, however, the value of imports declined from 1985 to 1987, from $52 billion to $43 billion (1986 dollars).

Imports from OPEC sources have also increased. Between 1985 and 1986, imports from OPEC rose from 36.2 percent of all imports to 45.6 percent. In 1987 that figure was 45.8 percent, and for the first six months of 1988, imports from OPEC accounted for 47 percent of all imports.

In its comment to the docket, which neither supported nor opposed NHTSA's proposal, the Department of Energy (DOE) expressed concurrence with NHTSA's description of the current energy situation, but DOE emphasized several issues about transportation's role in U.S. oil use and the importance of rising fuel efficiency. DOE said that the 11 mmB/D used by the transportation sector in 1986 is almost 80% of total U.S. fuel use of oil and over 90% of the critical light product use. Thus, DOE wanted NHTSA to consider that any significant moderation in growing oil demand will require large transportation efficiency improvements. DOE also emphasized that the 1987 Energy Information Administration's (EIA) oil demand forecasts used in the NPRM assume that average new car efficiency will continue to improve, which DOE said does not seem likely given fuel economy trends (at least to the levels assumed by EIA), and that even with these projected increases in fuel efficiency U.S. oil demand is projected to increase over 1.5 MMB/D by 2000.

Several other commenters also expressed concerns about the need of the nation to conserve energy. The American Council for an Energy-Efficient Economy (ACEEE) opposed the agency's proposal based on the commenter's concerns that reducing the CAFE standard would lead to higher oil consumption and imports, with an attendant reduction in national security and increases in the trade deficit, air pollution levels and environmental change. The Americans for Energy Independence (AEI) opposed a reduction, stating that oil consumption levels in the U.S. thwarted energy independence and that conservation gains in transportation could be enough to offset oil production losses in the 1990's. The Natural Resources Defense Council (NRDC) said that NHTSA should increase and not decrease the 1989 MY CAFE standard due to an "overriding economic national security and environmental importance."

NHTSA concurs with the commenters that the current energy situation and emerging trends illustrate the continued importance of oil conservation. As explained in the NPRM, oil continues to account for well over 40 percent of U.S. energy use, and 97 percent of the energy consumed in the transportation sector. While the U.S. is the second-largest oil producer, it contains only three percent of the world's proved oil reserves. Moreover, proved reserves have declined from a peak of 39.0 billion barrels in 1970 to 26.9 billion barrels in 1986. The NPRM also referenced 1987 Energy Information Administration (EIA) projections which found a decline in domestic production of oil and an increase in net imports. (*See*, 53 FR 33089 and NHTSA's final regulatory impact analysis which has been placed in the agency's docket section.) That discussion of the EIA projections was a subject of concern for DOE, which wanted to make clear NHTSA's understanding that the EIA forecasts assumed continued improvements in average new car efficiency. NHTSA acknowledges DOE's remark and notes that the comment reinforces NHTSA's belief that the level of oil imports, and the nation's need to conserve energy, remains an issue for the nation as a whole.

While the agency has concluded that there is a continuing need for the nation to conserve energy, NHTSA would like to emphasize the following five points in light of their importance for this rulemaking action. First, future projections about petroleum imports are subject to great uncertainty. For example, the EIA's 1977 Annual Report to Congress projected that net oil imports by the U.S. would, in the "reference case," reach 11 MMB/D by 1985. Net imports in 1986 actually were 5.4 MMB/D, less than half the level predicted in 1977.

Second, related to the above, the agency believes that the nation is in a stronger energy position than was the case in the mid-1970's. The nation's sources of oil imports are more diverse and less vulnerable to disruption, the nation s energy efficiency is much higher, and the absence of price controls permit the market to more easily respond to changes in supply and demand.

Third, NHTSA must balance the need to conserve energy with three other factors in determining the maximum feasible level for the 1989 MY fuel economy standard. However, as noted above, Congress has given the Department wide latitude in balancing these conflicting policies. Thus, the agency cannot deem this or any other factor to be the "overriding" one, as suggested implicitly by NRDC. As the court noted in affirming the agency's MY 1985 light truck CAFE standard.

> [I]t would clearly be impermissible for NHTSA to rely on consumer demand to such an extent that it ignored the overarching goal of fuel conservation. At the other extreme, a standard with harsh economic consequences for the auto industry also would represent an unreasonable balancing of EPCA's policies. *Center for Auto Safety v. NHTSA*, 793 F.2d at 1340.

Fourth, while NHTSA agrees that the need to conserve energy is important, the agency believes that Congress' quantified goal of energy conservation through improved automotive fuel efficiency has been realized (even though much of that improvement appears to be the result of market forces, instead of the operation of the CAFE law). The FRIA finds that passenger automobile fuel consumption decreased from an estimated 5.13 MMB/D in 1973 to 4.64 MMB/D in 1986, a 10 percent reduction. The passenger automobile share of total highway fuel consumption decreased from 71.2 percent in 1973 to 56.8 percent in 1986. The passenger automobile portion of total transportation oil consumption decreased from 56.7 percent in 1973 to 49.0 percent in 1980 and 45.5 percent in 1986. The passenger automobile fleet's share of total oil consumption declined slightly from 29.6 percent in 1973 to 28.5 percent in 1986. (The fuel economy of the total new car fleet is now even higher than the goal set by Congress 28.7 mpg for MY 1989, compared to the 27.5 mpg target in the statute.) These decreases in actual fuel consumption and in the passenger automobile fleet's share of fuel consumption took place even as the number of passenger automobiles registered increased from 102 million in 1973 to 135 million in 1986, and total travel increased from 1.05 trillion miles to 1.30 trillion miles.

Fifth, to the extent there is still a "need" to stimulate further fuel efficiency and energy conservation, the CAFE mechanism is largely ineffective. As discussed previously, the likely effect of a higher standard in MY 1989 would be to shift sales and jobs away from domestic manufacturers and toward foreign manufacturers, with little or no improvements in actual fuel economy. As the Department of Energy noted in its comments: "the Department is completely unconvinced that the standards are useful in actually achieving energy savings in today's market."

XI. Amending the MY 1989 Standard

As discussed above, section 502(a)(4) gives the Department considerable discretion in setting a CAFE standard below 27.5 mpg. *Public Citizen v. NHTSA*, 848 F.2d 256 (D.C. Cir. 1988);

Center for Auto Safety v. NHTSA, 793 F.2d 1322 (D.C. Cir. 1986). In determining the maximum feasible average fuel economy level, and hence the level of the standard, section 502(e) requires the agency to consider four factors: Technological feasibility, economic practicability, the effect of other Federal motor vehicle standards on fuel economy, and the need of the nation to conserve energy.

XI–A. Interpretation of "Feasible" and "Economic Practicability"

In the August NPRM, the agency noted that it has traditionally interpreted "feasible" to refer to "whether something is capable of being done, taking into account the four statutory criteria mentioned above." As discussed several times in this notice, the statute does not elevate any one of these criteria above the others, nor does it provide guidance to the agency in weighing any of these criteria more heavily than any others. Rather, the standard set is "the result of a balancing process specifically committed to the agency by Congress." *Center for Auto Safety v. NHTSA*, 793 F.2d 1322, 1341 (D.C. Cir. 1986). For example, the agency's determination of the "maximum feasible" standard cannot be that level which is merely that maximum technologically feasible without regard to the economic practicability of such a level.

In the final rule reducing the MY 1986 CAFE standard for cars, the agency stated the following about "economic practicability:"

> NHTSA has always considered market demand in establishing CAFE standards as that factor is an implicit part of the consideration of economic practicability. In a free market economy, market demand is one of the primary determinants of what manufacturers will be able to sell. As the agency has noted before, consumers need not purchase what they do not want. A standard set without regard to market demand could be overly stringent and economically practicable. 50 FR 40546, October 4, 1985.

And the Circuit Court upheld this view against suggestions that the agency "improperly elevated consideration of market forces and consumer demand, and impermissibly subordinated the statute's 'technology-forcing' design." *Public Citizen v. NHTSA*, 848 F.2d 256, 259 (D.C. Cir. 1988).

Again this year we believe that understanding the significance of market trends in assessing "economic practicability" is crucial to this rulemaking and the current competitive posture of the U.S. auto industry. This concern is underscored by Congress' recent enactment of the Omnibus Trade and Competitiveness Act discussed above. The major domestic manufacturers are confronting serious competitive forces. Among the most striking aspects of these forces are the decreases in the mid-size and large car size classes, the two classes in which the domestic manufacturers have been strongest and increases in the compact class, largely as a result of increased sales of compact cars manufactured by Asian manufacturers abroad or in this country. The shrinking large car sales jeopardizes one of the domestic manufacturers' principal sources of income and earnings, as well as jobs in that segment. These funds will be needed to help finance the actions necessary to attempt to bolster sales of compact, mid-size and large cars, as well finance research into new technologies for safety, fuel economy, performance, and customer comfort and convenience. It is anticipated that the domestic manufacturers will have to supplement their efforts to accommodate consumer demand and to respond to competitive pressures from foreign manufacturers through new model offerings with increased performance and luxury options. Taking these steps will necessitate that the CAFE standard for MY 1989 provide latitude for the domestic manufacturers since the steps will adversely affect their CAFE (although not overall energy consumption as explained below).

XI–B. Industrywide Considerations

In the NPRM, the agency noted that setting the CAFE standards must be based on "industrywide considerations." As the courts have found, "[s]tandards have an industry-wide effect and must take account of industry-wide concerns." *Center for Auto Safety v. NHTSA*, 793 F.2d 1322, 1339 (D.C. Cir. 1986).

The CAFE statute requires that, for each model year, there be a single standard for all passenger automobile manufacturers not exempted under section 502(c). Section 502 does not state expressly whether the concept of feasibility is to be determined in setting passenger automobile standards on a manufacturer-by-manufacturer basis or on an industrywide basis. The agency has therefore long interpreted this section in a manner that is consistent with the legislative history of Title V. The conference report accompanying Title V states, with respect to determining the maximum feasible average fuel economy level:

> Such determinations should therefore take industrywide considerations into account. For example, a determination of maximum feasible average fuel economy should not be keyed to the single manufacturer which might have the most difficulty achieving a given level of average fuel economy. Rather, the [Administrator] must weigh the benefits to the nation of a higher average fuel economy standard against the difficulties of individual automobile manufacturers. Such difficulties, however, should be given appropriate weight in setting the standard in light of the small number of domestic automobile manufacturers that currently exist, and the possible implications for the national economy and for reduced competition association (sic) with a severe strain on any manufacturer. However, it should also be noted that provision has been made for granting relief from penalties under section 508(b) in situations where competition will suffer significantly if penalties are imposed. (S. Rep. No. 94–516, 94th Cong., 1st Sess. 154–5 (1975))

In the NPRM, the agency explained the term "industrywide considerations," and the conference report discussion cited above, as follows:

> This language expresses two themes: first, a Congressional goal of improved fuel economy for the nation and second, fuel economy standards which are set at the maximum feasible level. NHTSA has construed this language many times. For example, as the agency stated in the 1977 notice establishing the MYs 1981–84 standards for passenger automobiles, Congress did not intend that standards simply be set at the level of the single least capable manufacturer. Setting standards in that fashion would have vitiated the CAFE program. This point can be illustrated by considering the effects of setting a standard at 19.0 mpg, based on the capability of a single manufacturer with a market share of less than one percent. Such a standard would have no possible impact on the balance of the manufacturers which, together produce more than 99 percent of all cars and have higher average fuel economies.
>
> Since this initial interpretation, the agency has expanded its position, noting that the statute contemplated that standards should not be set above the capability of manufacturers whose sales represent a substantial share of the market. (50 FR 29912, 29923) This would apply either to a single larger such manufacturer or to a combination of smaller manufacturers constituting together a substantial share of the market. In the final rule reducing the MYs 1987–88 standards, the agency concluded that the particular compliance difficulties of several of the European manufacturers, whose combined market share is relatively small, was not legally sufficient to justify a standard set far below the capabilities of the other manufacturers. (51 FR 35617)
>
> The agency does not believe that Congress intended the CAFE standards to be governed by the abilities of a single, narrow segment of the industry, such as the projected 0.8 percent market share of Mercedes in MY 1988, or even the 6.7 percent combined market share of European manufacturers in that model year. (It also should be noted that the 6.7 percent reflects all European manufacturers;

3.2 of those 6.7 percentage points represent European manufacturers that already achieve or exceed 27.5 mpg, i.e., Volkswagen/Audi and Yugo.) 53 FR 33085.

Mercedes-Benz and AIA took exception to the agency's position regarding "industrywide considerations" and the setting of CAFE standards. Mercedes-Benz stated that although limited line manufacturers like itself have taken all feasible measure to improve fuel economy, consumer demand prevents such manufacturers not only from meeting the existing standard of 27.5 mpg for MY 1989, but also the lowest proposed standard of 26.5 mpg. Mercedes argued that the CAFE standards were irrelevant and discourage safety innovation and that therefore the balancing of competing considerations dictated that the agency should set a standard attainable by limited line manufacturers. Mercedes stated in its petition that such a standard would be approximately 22 mpg. Mercedes argued there that NHTSA had the authority to promulgate a standard of 22 mpg, citing *Immigration and Nationalization Service v. Chadha*, 462 U.S. 919 (1983) and *Gulf Oil Corp. v. Dyke*, 734 F.2d 797, 802 (T.E.C.A. 1984), *cert. den., Dyke v. Gulf Oil Corp.* 469 U.S. 852 (1984). The latter case, involving provisions of EPCA relating to decontrol of crude oil, residual fuel oil, or any refined petroleum product, held the legislative veto provision in section 551 of EPCA to be severable from the rest of the statute. Mercedes argued alternatively, focusing on the language in section 502 of EPCA regarding the legislative veto, that Congress would have preferred a statute providing for improved motor vehicle energy efficiency and permitting reduction of the 27.5 mpg goal as necessary to no statute at all.

Mercedes argued that NHTSA's current approach to taking industrywide considerations into account focuses only on the two large, multi-line manufacturers, Ford and General Motors. This approach, according to Mercedes, confers a competitive advantage for those large manufacturers, and results in standards whose effect is not to produce additional energy savings, but only to impose penalties on limited line manufacturers.

AIA, which represents most of the limited line manufacturers which are the focus of Mercedes' comments, also argued against the agency's approach to "industrywide considerations." AIA said that approach "conflicts with both the technological feasibility and the economic practicability factors because it gives insufficient weight to consumer demand." If the standard were set based on proper consideration of the limited line manufacturers, AIA said that the standard would be less than 26 mpg. However, AIA believes that NHTSA is barred from setting a standard below 26 mpg because, in its view, the agency's authority to do so is inseverable from the legislative veto to which the exercise of that authority was subject before *Chadha*.

The agency believes that its approach to industrywide considerations is fully consistent with EPCA. Although the conference report on EPCA clearly states a congressional interest that NHTSA be particularly mindful of the effects of implementing the CAFE program on the domestic manufacturers (S. Rep. No. 94–516, 94th Cong., 1st Sess. 154–5 (1975)), the agency's analysis is not limited to those manufacturers. NHTSA's approach involves consideration of the capabilities of 100 percent of the manufacturers and the energy savings and compliance difficulties associated with different levels of standards. The approach results in the selection of a standard achievable by virtually all U.S. and Asian manufacturers and some European manufacturers that together represent over 95 percent of all cars sold in this country. Only certain European manufacturers, which concentrate on the production of larger, generally high performance, luxury cars and represent approximately 3.5 percent of all cars sold in this country, have not been projected to be capable of meeting the standards in recent years.

NHTSA believes that setting the standards at the level achievable by the least capable of the manufacturers (or group of manufacturers) with a substantial share of the market instead of the level of the limited line manufacturers of larger, luxury cars is most consistent with the energy saving goals of EPCA. While the agency believes that the bulk of the fuel economy improvements over the last decade were due to market forces (rising fuel prices, changing consumer demand, and greater foreign competition), the goal of the statute was to provide an additional incentive for the manufacturers to achieve and maintain levels of CAFE reflecting their maximum capabilities. Even if the contribution of CAFE standards to energy conservation appear to have been slight, EPCA reflects a congressional judgment about the value of standards making such contributions. This agency is bound by that judgment. Setting the standards at the level requested by Mercedes would vitiate the fuel economy program and require NHTSA to disregard Congress' judgment regarding the CAFE standards.

XI–C. Determining the Level of the MY 1989 Standard

Taking account of the four factors of section 502(e), NHTSA determines that the maximum feasible average fuel economy level for MY 1989 is 26.5 mpg. This level balances the small potential petroleum savings, discussed elsewhere in this notice, associated with higher standards against the substantial difficulties of individual manufacturers, especially domestic manufacturers, facing potentially higher standards and the impacts of such standards on the automotive industry and the economy as a whole.

In making this determination, the agency has followed its consistent approach of analyzing the ability of manufacturers to meet the standard. It has not included as part of its calculation of the standard the ability to pay penalties for not meeting the standard, or the availability of, or need for, credits.

NHTSA recognizes, however, that the record of this rulemaking indicates that the availability of credits is relevant to how at least one manufacturer, Ford, is likely to respond to an amended MY 1989 standard. As indicated earlier, there is a distinction between *meeting* a standard for a given model year, i.e., achieving the level of the standard for that model year, and *complying* with the standard. Ford stated at the September 14 public hearing that it would not do anything different if the standard remained at 27.5 mpg than if it were reduced, since it has a compliance plan using credits. The credits in question are carryforward credits that have already been earned, during MY 1986–88. The MY 1986 credits will expire if they are not used during MY 1989.

The issue of whether GM would have any carryforward credits available for MY 1989 was dependent throughout much of this proceeding on the outcome of a case before the U.S. Court of Appeals for the D.C. Circuit, *Center for Auto Safety v. Thomas*, which was decided on September 16, 1988. Now that the *en banc* court has vacated its opinion and judgment of May 17, 1988, denying the original petition for review and leaving EPA's decision in effect, GM will have some carryforward credits earned in MY 1988 that could be applied against a MY 1989, MY 1990, and/or MY 1991 shortfall. Thus, GM, like Ford, could comply with a 27.5 mpg standard for MY 1989 by use of carryforward credits that have already been earned, even if it achieves a MY 1989 CAFE

level somewhat under 27.5 mpg. The agency assumes that GM would prefer to retain its MY 1988 credits as insurance against possible shortfalls in MY 1990–91, rather than to use them in MY 1989. NHTSA also notes that there could be further appeal of *Center for Auto Safety v. Thomas*, and that litigation is pending that challenges NHTSA's reduction of the MY 1987–88 passenger car CAFE standards, which raises at least some possibility that those MY 1988 credits may not be available.

As discussed above, NHTSA has concluded that the 26.5 mpg level represents the MY 1989 CAFE capabilities of both GM and Ford in their domestic fleets. Since GM produces about 36 percent and Ford about 21 percent of all cars sold in the U.S., and since the manufacturers responsible for most of the balance of the cars sold in the U.S. achieve higher CAFE's, the agency believes that CAFE standards set at the level of the least capable of the two major domestic manufacturers ensures that the standards can be met by manufacturers representing a very high percentage of the total car production for the U.S. In light of the language of the Conference Report, cited above, the agency believes that standards set in this fashion represent an appropriate balancing of "the benefits to the nation of a higher average fuel economy standard against the difficulties of individual manufacturers," particularly in light of the competitive threats faced by GM. NHTSA also believes that given GM's and Ford's large market shares, a CAFE standard set at a level above either of their capabilities would be inconsistent with taking industrywide considerations into account.

A higher CAFE standard would substantially complicate the efforts of GM to respond to the competitive pressures confronting it. Such a standard would limit its efforts through product and marketing actions to regain lost market shares since those actions would entail increased sales of cars and options likely to reduce its CAFE. In addition, a standard set at the level of GM's projection, 27.2 mpg, would not adequately take into account some uncertainties associated with the GM projection that could, if they materialized, cause a reduction in GM's actual CAFE for MY 1989. These include EPA test result variability.

The agency has concluded that GM and Ford, as well as the manufacturers of most other cars sold in this country, can meet the 26.5 mpg standard for MY 1989 without engaging in harmful production restrictions and without any significant restrictions on consumer choice. Thus, no job or sales losses should result from GM and Ford, as well as the manufacturers of most foreign vehicle sold in this country, meeting the standard; indeed, that standard should help preserve the ability of the two domestic companies to recapture sales and jobs from competitors. Further, there should be no adverse economic impacts on automobile dealers, suppliers or automotive employees resulting from this standard.

NHTSA recognizes that the 26.5 mpg standard for MY 1989 is above the capabilities of approximately eight European manufacturers. For some of those manufacturers, the standard is several mpg above their capabilities.

Some of the European companies may thus be limited to two options: (1) Paying the statutory penalties associated with failure to comply with fuel economy standards, or (2) drastic product actions which, in the case of some, could require radical changes in the mix of cars they import. While the agency appreciates these difficulties, the agency does not believe there is any alternative available under the statute. NHTSA concludes that amending the MY 1989 standard to levels below 26.5 mpg would be inconsistent with a determination of maximum feasibility that takes industrywide considerations into account, as required by statute. Both the individual market share of each of these European manufacturers and the combined market share of all eight of those manufacturers is very small, i.e., less than four percent.

While NHTSA believes that energy conservation is important, it does not believe that the slight potential petroleum savings associated with a higher standard would justify setting the standard at a higher level, particularly given the competitive pressures facing the domestic auto industry. In analyzing the potential energy savings associated with standards within a range of 26.5 mpg to 27.5 mpg, the agency believes that it is appropriate to focus on GM and Ford. Since the Asian manufacturers, as well as several of the European manufacturers have CAFE levels well above 27.5 mpg, reflecting their concentration in the smaller size classes, a reduction in the MY 1989 standard does not create an incentive for those companies to change their product plans. Similarly, given Chrysler's current CAFE projections, the agency does not have any reason to assume that company would change its product plans as a result of a reduced standard. Finally, the agency does not have any reason to assume that the European manufacturers below the standard would change their produce plans as a result of the reduced standard. They have not indicated any plans to attempt to achieve higher CAFE levels in order to meet even the reduced standard.

It is doubtful whether there would be any quantifiable energy savings resulting from maintaining the 27.5 mpg standard, although a maximum bound can be calculated. NHTSA notes that this conclusion is consistent with the Department of Energy's comment that it is completely unconvinced that the standards are useful in actually achieving energy savings in today's market.

NHTSA expects that GM will respond to the 26.5 mpg standard by attempting to increase its market share by selling larger or higher-performance cars that would otherwise have been sold by other manufacturers. While this course of action would reduce the CAFE of GM's domestic fleet, it would not increase overall energy consumption. Conversely, if GM were faced with a standard higher than 26.5 mpg, it would sell fewer larger cars and engines. However, in place of the vehicle sales foregone by GM, there would be sales of foreign, typically high-performance, compact and mid-size cars whose CAFE in many instances would not differ significantly from that of the GM cars that would have been sold in their place. To the extent that GM responded to a standard higher than 26.5 mpg by restricting availability of its larger cars and engines, some consumers might keep their older, less fuel-efficient cars in service longer. Alternatively, they might choose to purchase large pickup trucks and vans to obtain the room, power and loadcarrying capacity they desire. Obviously, neither of these possibilities would improve energy conservation.

NHTSA expects that Ford, consistent with its statement at the September 14 public hearing, will not change its product plan as a result of the 26.5 mpg standard.

Notwithstanding the improbability of any significant impact on conservation, the agency has calculated the maximum hypothetical difference in gasoline consumption between GM and Ford achieving 26.5 mpg in MY 1989 and their achieving 27.5 mpg. The amount would be 0.9 billion gallons over the 20-year life of the MY 1989 fleet. The maximum increase in any individual year would be about 122 million gallons, approximately 0.05 percent of current oil consumption levels. The agency does

not believe that hypothetical savings of this magnitude would justify the significant competitive harm to GM that could result from a standard higher than 26.5 mpg.

Conversely, it can also be argued that the higher 27.5 mpg CAFE standard might actually result in increased gasoline consumption. Dr. Crandell stated at the public hearing that the short run effect of tightening CAFE would clearly be to increase the consumption of fossil fuels, because it would result in consumers postponing the decision to replace older, less fuel-efficient cars with new, more fuel-efficient cars. NHTSA notes that are two ways in which a higher CAFE standard could result in a possible increase in gasoline consumption: (1) If the higher standard caused manufacturers to restrict product offerings, which in turn encouraged consumers to keep older (less fuel efficient) cars, or to purchase pick-ups or vans (which are less fuel-efficient), or (2) if the higher standard impeded the ability of the U.S. manufacturers to compete vigorously in luxury/performance segments, and sales shifted to competing models of Asian manufacturers with lower fuel economy ratings. GM noted that larger domestic cars are often more fuel-efficient than smaller imported cars, citing, among other models, the large Buick Electra (3.8L/6 cylinder engine), with a fuel economy of 26 mpg, and the compact Acura Legend (2.7L/6 cylinder engine) and Toyota Cressida (2.8L/6 cylinder engine), which have fuel economies of 23 mpg and 24 mpg, respectively. While such effects may seem incongruous, it is important to remember that the CAFE law does not measure real fuel efficiency in the automotive sector, but instead uses an artificial bookkeeping system with numerous distortions (such as corporate averaging, the two-fleet rule, and separation of cars and light trucks).

The magnitude of this potential impact can be suggested with the following example: If, to meet a 27.5 mpg CAFE standard, GM curtailed production of its large (B-body) station wagons, which achieve 22.9 mpg, but these lost sales went to GM's own minivan, the Astrovan (which is a light truck for fuel economy calculation purposes), GM's passenger car CAFE would rise by about 0.1 mpg but total fuel consumption would actually increase. This would occur because the Astrovan achieves a fuel economy about 1 mpg lower than that of the B-wagon. This switch, from station wagons to minivans, would raise passenger car CAFE but actually result in an additional 10 million gallons of gasoline being consumed over the life of those vehicles.

The agency does not believe that either "worst-case" scenario on the issue of energy conservation is likely. On the contrary, NHTSA believes the impact of the MY 1989 standard on actual gasoline consumption will be negligible. The agency notes that, for MY 1986–88, when the CAFE standard was set at 26 mpg, the actual CAFE of the total new car fleet still increased, from 27.9 mpg to 28.7 mpg. Moreover, the manufacturers have indicated their product plans for MY 1989 are fixed; and there are no signs of product restrictions. There may be shifts in sales among manufacturers (which may be influenced by CAFE), but the CAFE of the total MY 1989 fleet is unlikely to be affected by any NHTSA decision on CAFE in the 26.5 to 27.5 range.

To show how a given manufacturer's CAFE can increase while not positively affecting total fuel consumption, consider the following: if GM curtailed production of its Cadillac Brougham, its CAFE would increase by 0.06 mpg. If consumers desirous of this type of luxury car instead purchased a Lincoln Town Car (Ford has extensive credits which currently enable it to sell additional less fuel efficient cars), total fleet fuel consumption would actually increase by 26 million gallons over the lifetime of the affected fleets.

Just as it is doubtful whether there will be any quantifiable increase in energy consumption resulting from reducing the 27.5 mpg standard to 26.5 mpg, it is doubtful that this action will have any impact on the environment. A number of commenters expressed concern that a reduced standard would result in increased emissions of a number of pollutants, including hydrocarbons, carbon monoxide, nitrogen oxides, chlorofluorocarbons, and carbon dioxide. Commenters particularly focused on carbon dioxide, since it contributes to the "greenhouse effect." NHTSA addressed the potential environmental impacts associated with this rulemaking in an environmental assessment. In addition, the agency has prepared a supplement to the Environmental Assessment in order to address comments submitted by various organizations and individuals. The agency observes here that carbon dioxide emissions are produced in direct proportion to gasoline consumption. Therefore, the reasons discussed above concerning why a reduced standard is unlikely to result in any quantifiable increase in gasoline consumption also mean that a reduced standard is unlikely to result in any quantifiable increase in carbon dioxide emissions.

The Center for Auto Safety (CFAS) argued that relaxation of the CAFE standard would permit the domestic auto companies to export small car production and U.S. jobs abroad. That commenter argued that the record is clear that CAFE relaxation costs U.S. jobs and CAFE strengthening saves U.S. jobs, since GM and Ford have increased their sales of captive imports during the last several years. CFAS argued that GM and Ford could have improved their CAFE and created more domestic jobs if they had produced these cars in the U.S. Also, Mr. Owen Bieber, president of the UAH, urged NHTSA to consider both the implications of not lowering the standards and of lowering the standards. Mr. Bieber stated that the lowering of the standards should not provide the companies with an incentive to outsource small cars.

The record does not support the belief that maintaining the 27.5 mpg standard for MY 1989 would increase American jobs. The economic reality is that small car jobs have been lost due to competition from foreign manufacturers which enjoy large cost advantages. Higher standards would not bring those jobs back. The domestic manufacturers import small cars in response to that competition. If GM and Ford did not import particular small cars, a greater number of small cars would be imported by other manufacturers.

GM stated at the September 14 public hearing that the fuel-efficient Chevette, a domestic small car that company once produced, was not redesigned because GM couldn't compete in that market. GM emphasized that its inability to compete in that market is the reason it is working on Saturn at this point in time, which will probably come out in 1990 as a 1991 model. GM emphasized that it has increased its import fleet from zero in 1984 to over 300,000 in 1988 to maintain a presence in that market until it can get Saturn on the street. GM's August 1988 submission included an article on Saturn which characterized the project as a "development program for a new family of import-fighting subcompact cars planned for production in the United States." The article indicated that GM is spending $2 billion on the first phase of Saturn.

A higher MY 1989 standard would not bring Saturn along sooner. Moreover, given the importance of Saturn to GM, NHTSA agrees with that company that Saturn could not, and cannot, be "rushed." Given the current competitive market, it is essential that the car be "right" when it is introduced. NHTSA

also observes that while Saturn will not help GM's MY 1989 CAFE, the Saturn project is an added reason to find that GM has continued to make reasonable efforts to achieve the 27.5 mpg standard.

Just as the agency cannot justify at standard of 27.5 mpg for MY 1989, neither can it justify keeping the standard at the level of the MY 1988 standard, i.e., 26.0 mpg. NHTSA is mindful of the statutory command to set the MY 1989 standard at the maximum feasible level. Since its review of the market suggests that even a fully competitive U.S. auto industry would achieve a fuel economy higher than 26.0 mpg, a higher standard must be set. The agency is also commanded by the CAFE law to give due weight to all statutory factors, including the need of the nation to conserve energy. NHTSA is reminded by the Department of Energy in its comments to this proceeding that the nation's conservation needs are greater now than they were in 1985, when the agency first set the standard at 26.0 mpg. Balancing the agency's view about what level of standard is economically practicable for MY 1989 against the nation's conservation needs, NHTSA believes that a proper balance between these factors can be reached by increasing the standard to 26.5 mpg, a 0.5 mpg increase over the 1988 level. This increase also demonstrates the agency's recognition of the role of fossil fuel conservation in reducing carbon dioxide emissions, which are thought to be a major factor in the "greenhouse" effect. While NHTSA has concluded, and firmly believes, that a standard at 26.5 mpg will have no significant effect on the human environment, as compared with a standard of 27.5 mpg, the agency also sees the increase in the standard to 26.5 mpg as appropriately taking into account the need of the nation to conserve energy. Moreover, taking this step can be made without threatening the competitiveness of the U.S. auto industry. It is important to note at this point the results of the agency's analysis (described more fully in the accompanying regulatory impact analysis and environmental assessment) demonstrating that the maximum hypothetical increase in fuel consumption of a standard set at 26.5 mpg as compared with 27.5 mpg is substantially less than a fraction of one percent. Indeed, this figure probably overstates the actual results as noted in those supporting documents. Further, as noted elsewhere in this notice, the Department of Energy has expressed strong doubts about the effect of CAFE standards on energy savings under current market conditions.

XII. Impact Analysis

XII–A. Economic Impacts

The agency considered the economic implications of this action and determined that the amendment is major within the meaning of Executive Order 12291 and significant within the meaning of the Department's regulatory procedures. The agency's detailed analysis of the economic effects is set forth in a Final Regulatory Impact Analysis, copies of which are available from the Docket Section. The contents of that analysis are generally described above.

XII–B. Environmental Impacts

The agency has analyzed the potential environmental impacts of the amendment to the 1989 model year passenger automobile average fuel economy standard in accordance with the National Environmental Policy Act, 42 U.S.C. 4321 *et seq.* The agency prepared an Environmental Assessment (EA). Comments were received from members of Congress, manufacturers, interest groups and individuals. The agency prepared a supplement to the Environmental Assessment in order to address the comments. Based on the agency's review of the comments and all available information, the agency has determined that this rulemaking action will not have a significant effect on the environment. As discussed above, the agency's analysis has included the possible effects of the potential increase in carbon dioxide (CO_2) build-up as the result of action lowering the standard (build-up is known as the "greenhouse" effect). Copies of the Environmental Assessment and supplement are available from the Docket Section.

XII–C. Impacts on Small Entities

Consistent with the provisions of the Regulatory Flexibility Act, the agency has considered the impacts this rulemaking would have on small entities. I certify that this action would not have a significant economic impact on a substantial number of small entities. Therefore, a regulatory flexibility analysis is not required for this action. No passenger car manufacturer would be classified as a "small business" under the Regulatory Flexibility Act. In the case of small businesses, small organizations, and small governmental units which purchase passenger cars, this amendment would not affect the availability of fuel efficient passenger cars or have a significant effect on the overall cost of purchasing and operating passenger cars.

XII–D. Impact on Federalism

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that the rule does not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment.

XIII. Department of Energy Review

In accordance with section 502(i) of the Cost Savings Act, the agency submitted this proposal to the Department of Energy for review. There were no unaccommodated comments.

List of Subjects in 49 CFR Part 531

Energy conservation, Fuel economy, Gasoline, Imports, Motor vehicles.

In consideration of the foregoing, 49 CFR Part 531 is amended as follows:

PART 531—PASSENGER AUTOMOBILE AVERAGE FUEL ECONOMY STANDARDS

1. The authority citation for Part 531 continues to read as follows:

Authority: 15 U.S.C. 2002, delegation of authority at 49 CFR 1.50.

2. The table in § 531.5(a) is revised to read as follows:

§ 531.5 Fuel economy standards.

(a) * * *

Model year	Average fuel economy standard (miles per gallon)
1978	18.0
1979	19.0
1980	20.0
1981	22.0
1982	24.0
1983	26.0
1984	27.0
1985	27.5
1986	26.0
1987	26.0
1988	26.0
1989	26.5
1990 and thereafter	27.5

* * * * *

Issued: September 30, 1988.

Diane K. Steed,

Administrator.

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